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The new invasion

Why a wave of Hollywood films are stealing the best tech games have to offer

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The changing face of games outsourcing
The 9 GDC sessions you must not miss
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Game Republic is an industry-led games network for the Yorkshire and Humber region, UK. If you'd like more information about games development in the north of England contact Game Republic and meet us at GDC 2010, San Francisco.

Jamie Sefton, Sector Manager, Game Republic. **jamie@screenyorkshire.co.uk**
+44 (0)113 236 8239. www.gamerepublic.org

Welcome to the STATE of INDEPENDENCE 08 04 2010 YORK Racecourse

International Conference for Developer Self-Publishing
Date: Thursday 8th April 2010
Place: York Racecourse, York, UK

Key areas to be covered at State of Independence will be:

- Different routes to market and new business models
- Funding your game – including access to investors
- Learning from current success stories
- Marketing your own games – including PR, viral marketing and customer service
- Networking with other games industry professionals

For more information about the conference and speakers or to book places, visit **www.state-of-independence.net**
A Super Early Bird discount starting at £75 is available until 16 March 2010.

Moving Forward: The Northern Way — one Northwest — NorthernNet — CODEWORKS GAMEHORIZON — GAMEREPUBLIC. — SCREEN YORKSHIRE

Contents

DEVELOP ISSUE 103 MARCH 2010

ALPHA

05 - 08 › DEV NEWS FROM AROUND THE GLOBE
A new opportunity to outsource staff from Canada's Prince Edward Island; service firms tell us how they're now directly targeting developers; plus our guide to all the important upcoming events in the game development sector

16 - 20 › OPINION AND ANALYSIS
Rick Gibson argues a long-held belief that games will 'subsume everything'; Owain Bennallack wonders what the iPad means for game developers; Billy Thomson questions if motion control will ever replace the keyboard and pad; David Braben discusses the pros and cons of giving game discs serial codes; and Ben Board wonders why games lock off content to those not so skilled players

22 › GDC PREVIEW
Nine sessions that you won't want to miss at this year's Game Developers Conference

BETA

26 - 28 › GAMES ON FILM
How films like *Avatar* are relying on games technology to wow audiences

30 › THE THIRD DIMENSION
Blitz Games Studios' Andrew Oliver discusses lessons learnt in bringing out the first console stereoscopic 3D game, and how the technology will grow

33 - 34 › LOCALISATION AND QA FORUM
Localisation and QA firms discuss how simultaneous ship dates and open betas are changing the industry

36 › DIGITAL QUALITY
Testology's Harrison Baker on how DLC affects the testing process

43 › EXPERIENCE POINTS
Dr. Graham McAllister discusses user experience testing for game developers

BUILD

46 › TRINIGY'S NEW VISION
Vision Engine 8 is going after browsers – we discover how and why

50 › HEARD ABOUT: EYEPET
John Broomhall talks to SCEE on scoring for its new virtual pet game

51 › SPECIAL EFFECT
How BioWare iterated on UE3 to create *Mass Effect 2*

develop DIRECTORY 57 - 64
STUDIOS, TOOLS, SERVICES AND COURSES

develop
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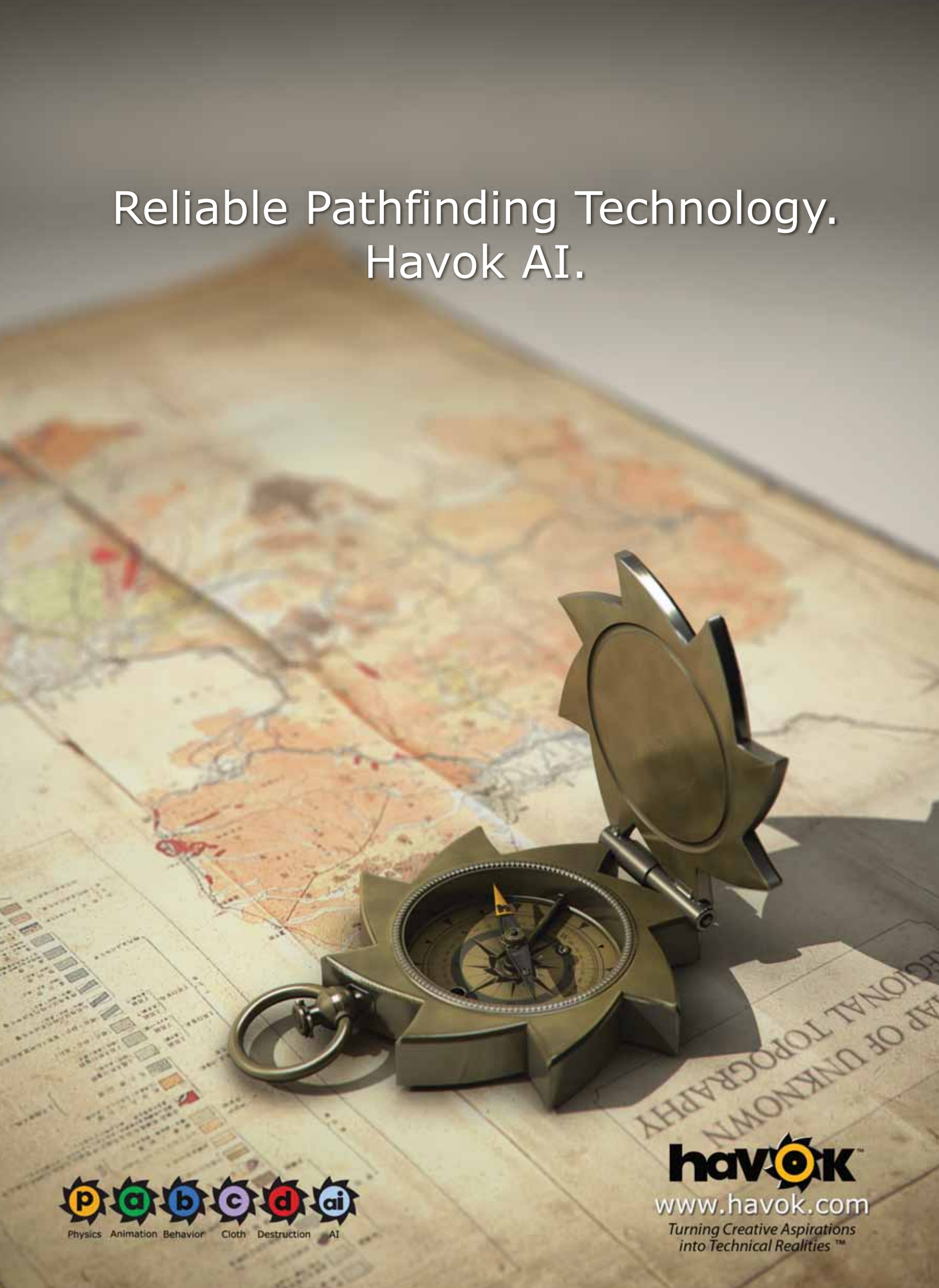
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"Apple seems happy to flood iPad with pre-existing software…."
Owain Bennallack, p17

Outsourcing ups its game
News, p06

Develop Diary: Key industry event listing
Events, p08

The Nine GDC Sessions You Must Not Miss
Events, p22

New plan offers Canada tax breaks to studios in the UK

Special outsourcing-style talent hub, supported by Prince Edward Island, targets indie firms

by Michael French

UK DEVELOPERS will soon be able to take advantage of a subsidy-supported workforce – but not thanks to local Government efforts.

Instead, a new scheme has emerged that will allow independent developers the chance to tap into the Canadian games development workforce through a talent centre opening in Prince Edward Island on the country's East Coast.

The initiative, spearheaded by QuickstartGlobal, aims to both redefine what the indsutry expects of outsourcing – and satisfy calls for access to a cheaper staff.

Quickstart already supports a number of games and IT clients with its 'in-house anywhere' offer. Growing from just three staff to 800 in four years, the firm has built resources in India, Bulgaria, Nicaragua, Taiwan, and Cape Town, with a China office in the works, too.

Quickstart has been responsible for UK studios like Sumo Digital and Monumental building up their Indian outsourcing operation.

But in conjunction with Prince Edward Island's authorities, Quickstart will build a hub of games developers in North America for the first time, the firm revealed to Develop ahead of a formal announcement at GDC this month.

A new outfit in picturesque PEI, Canada that aims to redefine outsourcing will soon be available to UK studios

> ***"This will be attractive to developers in Canada as well. Not all of them want to waste a career as Coder No. 732 at one of the big studios."***
> Prem Gyani, QuickstartGlobal

"Prince Edward Island is very keen to grow its share of the games market. We've been working with them to develop a proposition for independent games studios that we feel can really help those developers. What we can do, in simple terms, is enable them to take advantage of the subsidies," explained Elspeth Levi, marketing manager.

"Where we differ from outsourcing is that although the workforce is employed by us, the client selects their own staff and goes through the CVs and then they direct the work they do day-to-day. Quickstart Global take care of all the things that a company needs to succeed: HR, recruitment, IT needs and infrastructure. The client works with the staff that they have selected, and makes sure they have a real engagement with their culture and brand. That's really important for games – the reason outsourcing hasn't worked for some people is that they feel it's just farming out work, not taking ownership of it, and then being disappointed when it comes back wrong."

Sales director Prem Gyani added that the deal is a good compromise given UK developers' lobbying for tax breaks: "We've spent the last few years watching the games industry sit around and complain about the lack of subsidies – but anyone would have realised that when Lehman Brothers collapsed 18 months ago that priorities for the world changed."

He also added that access to Canadian staff will be attractive to those unconvinced by a work-for-hire culture clash: "India is right for some companies and wrong for others – it's perfect for pure brain power, from animation, phyiscs and mathematical thinking. But when it comes to things like needing artists who have a cultural affinity with the target market, Canada is ideal. A UK studio can now go and find a few people in another country that matches their needs, but at half the cost.

"This will also be naturally attractive to developers in Canada as well, because not all of them want to waste their career being Programmer No. 732 forever at one of the big studios over there. Working in a creative game managed by a dynamic British studio looks great on their CV."

www.quickstartglobal.com

Castle to keynote Develop Conference

FORMER EALA VP of creative development Louis Castle is to deliver the opening keynote at the Evolve day of the Develop Conference.

Castle, who worked with Steven Spielberg on the *Boom Blox* franchise and headed up EA's disruptive Blueprint division, recently left the publisher to head up browser gaming startup InstantAction.

The event takes place on Tuesday, July 13th – the first day of the Develop Conference – and covers the emerging markets for developers such as digital distribution, social gaming and iPhone development.

The day's closing keynote will be delivered by Unity founders David Helgason and Nicholas Francis.

"The Evolve Conference kick starts Develop in Brighton and was fantastically well received last year, attracting influential delegates from across the industry," said Andy Lane, managing director of organiser Tandem Events.

"It's designed to tackle the exciting opportunities that exist within the social, casual and online sectors, so we're delighted that Louis and David are keynoting."

develop-conference.com

Editorial

Balance of power

WHEN IT COMES to *Avatar* specifically, I'm often left wondering what the big deal was.

Certainly, the special effects were impressive, boasting a meticulous effort to fool the eyes that all those CG sets and aliens were real. And yes, the 3D was impressive.

But blue giants aside, it's artistic style was a little bland, the *Dances With Wolves*-style plot tiresome, and the last 60 minutes just felt like watching someone else play *Halo*.

And yet perhaps all those criticisms pinpoint where games can win out over film.

We've all heard the talk of games becoming more like film – but the schlock that cinema audiences (myself included) lap up are today more and more like games. Hulking CGI monsters doing battle to bring a paper-thin plot to its conclusion? Could be *Transformers* or *District 9* as much as it could be *Halo*.

Obviously for the games industry this is an opportunity. Now our customer base has widened to include Hollywood, which wants decent tech for pre-viz, production and post-filming.

The real advantage, though, is that the rush towards 3D and technology that everyone from Hollywood to Silicon Valley is familiar with leaves a weak spot for all games developers to target. Namely: story, narrative and player engagement.

While big movie studios busy themselves with greenlighting a wash of films like *Avatar*, getting wrapped up in the technical rather than the emotional, they leave open a space for developers to prove themselves as masters of storytelling.

It's already starting to happen across the scale, from Sony-funded *Heavy Rain* to the indie hit *VVVVVV* and smaller games like LucasArts' *Lucidity*.

But as gaming becomes more entrenched and accepted in people's lives – just check out the comments from our columnists this month, many of which happen to talk about the clash between gaming and The World Outside – I reckon we'll see more of this in time as the world turns to games for the centrepiece of its entertainment life.

Michael French
michael.french@intentmedia.co.uk

Outsourcers

New services from Babel, Image Metrics, Testronic and Sitel emerge

DEVS GO DIRECT

by Michael French

MORE AND MORE developers are choosing to directly manage customer services for downloadable games.

According to outsourcing specialist Sitel, the growth in the number of online channels isn't just empowering developers to self-publish and talk directly to consumers, but evolve the relationships it has with its valued customers.

The firm is outsourcing in the traditional sense, having helped the likes of CCP (*EVE Online*) set up their customer relations services – but the company is finding itself more and more in demand amongst the games industry.

Joe Doyle, EMEA marketing manager for Sitel, says the company has seen a first hand increase in the number of games developers looking to take over the customer service part of the way they deal with their customers.

"There is a growth in requirements and the majority are looking for outsourced specialist support as it offers flexibility and expertise," he said.

"Additionally, the larger outsourcers such as Sitel have particularly good language coverage which is especially attractive to US developers looking to penetrate the European market."

Sitel's offer is quite broad, including: chat ticket and email management; self-help; in-game events; community management; game mastering; moderation; plus billing and technical support.

Doyle says while developers are keen to manage those services themselves and work closer with their audience, some aren't necessarily prepared for the dialogue – and many don't want to deal with any headaches in building up a dedicated customer service team.

"The increased take-up of digital download versus retail boxed products is likely to mean that developers start to have a more direct relationship with the gamer – this will therefore increase the need they have for service support," he said.

He added that more and more studios are wary of the fact bad consumer relations can drive paying customers away: "Service is one of the key areas of competitiveness. Developers that place greater care and attention on how their communities are developed are far more likely to succeed in increasing subscriber numbers and reducing customer churn."

Sitel now wants to work closer with the games industry on building those customer care elements into the production process – or at least help it become mindful of them during development.

> ***"Developers that place greater care and attention on how their communities are developed are far more likely to succeed in increasing subscriber numbers."***
>
> Joe Doyle, Sitel

Said Doyle: "Some studios have done a much better job than others, but areas that developers should think about improving include considering the in-game customer support tools early in the development process.

"Also forecasting is difficult in terms of demand but needs to be tackled pragmatically. Experienced outsourcing companies have sophisticated tools to help with both sizing and forecasting.

"Having the outsourcer engaged before beta testing in order to provide service adds value, such as FAQ development, scenario testing, escalation and KPI process documentation, training design and so on."

www.sitel.com

EVE Online developers CCP already use Sitel for their customer service needs

upping their game

to take the pressure off games with big and small budgets – and help developers with customer relations

FACING UP TO LOCALISATION

FACIAL ANIMATION experts Image Metrics has teamed up with Babel Media to dramatically improve the quality of localisation for high-end games.

A new partnership between the two will see Babel's popular localisation pipeline – which includes voice recording for different languages – married with Image Metrics' technology, which quickly produces high-volumes of animation data for a number of high-profile games developers.

The aim is to raise the quality of non-English versions of new games by matching characters' facial inflections to those of the voice artist, instead of simply dubbing over English-language animations or worse, just subtitling them.

"Currently, most developers are forced to sync the existing English facial movements to the localised audio track," explained Michael Starkenburg, CEO of Image Metrics. "This is a cumbersome manual process that delivers poor results. Some do nothing."

He added: "Babel was the obvious choice for our expansion into localisation. No other partner has Babel's scale in translation and localisation - with over 400 in-country translators – or their truly global reach. Image Metrics and Babel already enjoy an extensive shared customer list, including Ubisoft, Take-Two, and Activision-Blizzard, so marketing the combined offering seems a natural fit. Also, Babel's experience leveraging technology in their business will be very valuable to Image Metrics as we develop more localisation-specific functionality into our tech."

> ***"Image Metrics' Babel partnership, and its impact on localisation, is a great example of better integration with a developer's lifecycle."***
>
> Michael Starkenburg, Image Metrics

Image Metrics and Babel Media can now localise facial animation for different languages

To capture the new data for animating the more accurate facial expressions, Babel films voice over actors when they read game dialogue and narration in each language – although the footage is just basic DV, it captures the nuances of inflection and tone relevant to each language.

Added Starkenburg: "Image Metrics' technology addresses the specific, hard problem of developing realistic, expressive facial animation. This problem is big for developers and getting bigger, as game platforms get more capable and consumers become more demanding. The more ways we can integrate into the developer's lifecycle, the better we help them solve the problem. The partnership with Babel, and its potential impact on localisation, is a great example of this, and for our part, we're actively looking for other ways to simplify the development process."

www.image-metrics.com
www.babelmedia.com

NEW QA OFFER FOR SOCIAL GAMES

SOCIAL AND CASUAL games are a hot field to break into, not just if you're a games developer – but a QA firm too, it turns out.

Testing and localisation outfit Testronic Labs has told *Develop* it is opening a new division to service one of the fastest growing categories in the global games industry.

In recent years, the likes of Zynga, Playfish and others have come out of nowhere to create some of the world's most popular games, played predominantly on Facebook.

Now Testronic Labs is offering a service that supports other companies with plans to join this lucrative emerging sector.

> ***"We are defining casual and social games QA as a new division, leveraging the skillsets of our pan-global network of labs."***
>
> Lisa Ravenscroft, Testronic Labs

"We are defining casual and social games QA as a new division within our company, leveraging the complementary skillsets of our pan-global network of labs," explained Testronic's head of marketing Lisa Ravenscroft.

Testronic runs QA and localisation facilities in Europe, the UK and the US – but also has a dedicated lab in Central London that deals exclusively with networked and web applications.

"This setup, staffed by test engineers with specific backgrounds in white-box testing of various forms and skills in code engineering, is increasingly relevant in the games space," explained Ravenscroft. "Their skillset and the general profile of our highly-trained software professionals coupled with our access to industry-leading performance and network test tools allows us to offer something great to casual and social games companies alongside our long-standing service offerings.

"Casual and social game companies can capitalise on this unique breadth of QA expertise as they frequently require unique testscripts, often automated, to monitor their various portals and interfaces with websites. Each client has a unique need thanks to the differing setup of their delivery methods online."

It's not the only hot area of the games industry that Testronic wants to move into as game developers eye new technologies – the firm is also looking at 3D game testing services.

Added Ravenscroft: "We have great core skills in this field and the ideal equipment setup thanks to our Blu-ray and home entertainment testing business."

www.testroniclabs.com

DEVELOP DIARY

YOUR COMPLETE GAMES DEVELOPMENT EVENT CALENDAR FOR THE MONTHS AHEAD...

GDC CANADA
May 6th to 7th
Vancouver, Canada
www.gdc-canada.com

With the main GDC event taking place this month, its Canadian cousin is already looming on the horizon.

GDC Canada promises to be a forum that welcomes Canadian and international developers to share best practices for fostering excellence and creating quality games intended for distribution within their region and on a global scale.

This year the conference emphasises studying the challenges and opportunities of creating games with long production cycles, large development teams, and multi-platform releases.

GDC Canada will take place at the Vancouver Convention and Exhibition Centre in Vancouver, British Columbia.

MARCH 2010

THE DEVELOP QUIZ
March 4th
London, UK
www.develop-online.net/events

GDC 2010
March 9th to 13th
San Francisco, US
www.gdconf.com

AI SUMMIT
March 9th to 10th
San Francisco, US
www.gdconf.com/conference

MICROSOFT'S X48 GAME CAMP
March 19th to 20th
Huddersfield, UK
x48huddersfield.eventbrite.com

APRIL 2010

STATE OF INDEPENDENCE
April 8th
York, UK
www.state-of-independence.net

NORDIC GAME 2010
April 27th to 29th
Malmö, Sweden
www.nordicgame.com

MAY 2010

GDC CANADA 2010
May 6th to 7th
Vancouver, Canada
www.gdc-canada.com

MONETISING MOBILE
May 26th
BAFTA,London
www.mobile-ent.biz

JUNE 2010

FESTIVAL OF GAMES
June 4th to 5th
Utrecht, Holland
www.festivalofgames.nl/site

E3 2010
June 15th to 17th
Los Angeles, US
www.e3expo.com

JULY 2010

DEVELOP IN BRIGHTON
July 13th to 15th
Brighton, UK
www.develop-conference.com

DEVELOP AWARDS
July 14th
Brighton, UK
www.develop-online.net

CASUAL CONNECT SEATTLE
July 20th to 22nd
Seattle, US
seattle.casualconnect.org

AUGUST 2010

GAMESCOM 2010
August 18th to 22nd
Cologne, Germany
www.gamescom-cologne.com

OCTOBER 2010

CASUAL CONNECT KYIV
October 20th to 22nd
Kiev, Ukraine
kyiv.casualconnect.org

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Image Metrics Gives Good Face.

WHO IS IMAGE METRICS?

Image Metrics uses its proprietary technology that currently analyzes standard or high definition video to provide superior facial animation to the games industry. Our software, developed by a team of computer vision Ph.Ds, uses a marker-less based facial performance capture technology to create faces better, faster, and cheaper. Some of the best-known production studios in the industry have adopted Image Metrics' solutions such as Electronic Arts, Activision, Ubisoft, Take 2 Interactive, and Sony.

ANIMATION

Ido Gondelman > Animation Supervisor

***Q:** Why use Image Metrics for your facial animation solution?*

A: Great question! Having spent 15 years at well-known production (and post production) houses, I have been fortunate to have worked on award winning films, commercials, music videos and several AAA title games. I was amazed to discover that we could average 20 to 30 minutes a week in approved animation deliverables while maintaining the kind of quality I experienced at the other studios by leveraging the Image Metrics software and production process.

Here at Image Metrics we have projects ranging from games to commercials to feature films. The level of quality must remain universal throughout, no matter the platform and formats. Some of the large projects we work on have as many as 60 different characters and consist of over 350 minutes of facial animation. We insure that each project is set up with proper character rigs before we utilize the tech.

We work closely with and support our client thereby insuring that their artistic vision for each character is met. The integration of the client's vision and leveraging of our proprietary technology lets us produce or help you produce such great results at large volumes of work. Our clients expect quality results and fast, Image Metrics gives you an animation advantage in the market place!

PRODUCTION

Andrew Egiziano > Director of Production

***Q:** How easy is it for production to integrate Image Metrics' technology into the client's pipeline?*

A: One of the true virtues of the Image Metrics pipeline is a simple tenant that evolved over years "We must remain agnostic to the client's pipeline to be able to deliver them the best product." This is a huge benefit to any client. Our ability to adapt to any pipeline and make the transition to the client's workflow is a great source of pride for our product developers and animation staff. I must admit it also comes with a lot of hard work and an effort to get to know our customer's needs and service requirements. However, that effort to keep the deliverable seamless keeps Image Metrics on the cutting edge of product delivery, customer service and technology.

RIGGING

John Riggs > Rigging Supervisor

***Q:** What is the best way to build a rig for a game engine?*

A: The best rig for the game depends as much on the engine for the game, as it does the amount of characters that are going to be shown at once. We rig the characters at the highest level that we can fit in the memory allotted for the character. We are constantly pushing the number of joints and blendshapes (if available) used in the rig, while still optimizing the channels animated to conserve memory. In short, the way to best build a rig for a game is to work closely with the developer to find the best areas to optimize the rig, while still keeping the complex performance structure of it in place for the software and the animators. We analyze the engine, rig and use case to get you the best possible animation in your game.

ENGINE OPTIMIZATION

Peter Busch > Technical Account Director

***Q:** What are the tips and tricks for optimizing facial animation in a game engine?*

A: Our technology is very flexible as to the density and the way we set keyframes coming out of the backend of our tech. This flexibility allows our integration specialists the freedom to reduce keys, manipulate the data, and more easily fit into the variety of custom pipelines we see across our productions. One such client had a need in their key compression so that every time we set a key (on anything), all the keyable attributes had to have a key. This was counter production to our workflow, but our development team was able to write a simple post-processing filter that was applied once animation was complete to satisfy the needs of our client. The tech allows for an infinite amount of ways of data as a deliverable—typically animation curves that have had their keys reduced by 70-80% from having a key on every frame.

WHAT'S NEXT?

New software from Image Metrics-- We are launching our new beta software product at GDC! Come check our software at Booth #1910

Come talk to us about joining other studios, sign up for FaceWare™ beta now, Facial Animation on your terms.

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Booth #1910

Sponsored Session
"Facial Software Technology"
Friday, March 12
3:00-4:00pm Room: East Mezz 220/222

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WorldView

Our monthly digest of the past month's global games news…

DEALS

Social games giant and creator of *FarmVille* **Zynga** has expanded its operations with the acquisition of fellow Facebook games studio **Serious Business**.

Auto LOD creation and setup tech **Simplygon** is now available as a pre-built integration for **Emergent's** Gamebryo Lightspeed.

German indie **Spellbound** has signed a deal with **Simul Software** to use its Weather SDK, which dynamically generates volumetric weather systems that change in real-time.

UK MMO and middleware studio **Monumental Games** is one of the first studios to land investment from the **Capital for Enterprise Fund** – it has received £2m in funding to grow its business and technology.

Jagex, the Cambridge, UK-based creator of *RuneScape* has moved into publishing by releasing **UltiZen's** Chinese PC MMO *War of Legends* for Western gamers.

Russian venture capital firm **Almaz Capital Partners** has bought a 23 per cent stake in Russian casual game developer **Alawar Entertainment.**

BIGPOINT EXPANDS IN THE US

German games giant and *Dark Orbit* developer Bigpoint is planning to open a new offices in Silicon Valley.

The San Francisco US office will house a development studio, along with business development, marketing and PR departments.

"The US is one of the most strategically important markets for us," explained Heiko Hubertz, the 33-year-old CEO and founder of Bigpoint, who will move over to the States in order to oversee the new operations. Bigpoint already has US ties, with media firm NBC *Universal* having invested in the company back in 2008.

Hubertz added: "Now that we have spent the past several months building up a strong and experienced management team for our Hamburg headquarters, I am going to personally oversee the successful development of the US market in the coming months."

www.bigpoint.com

FINLAND

REDLYNX ENJOYS RECORD DIGITAL SALES

Finnish developer RedLynx has announced that 2009 marked the firm's most successful year to date.

The studio – best known for its popular XBLA title *Trials HD* – said that over 1.5 million of its games were sold in 2009.

In September last year RedLynx said it had sold over 300,000 copies of *Trials HD* over Xbox Live – a figure which validates the digital market, the firm recently said.

"Xbox Live Arcade definitely provides an excellent platform for high-quality games like *Trials HD* at very affordable price point," said group CEO Tero Virtala.

"We started to focus more heavily on developing and publishing our multi-platform games on digital channels, significantly increasing sales. Obviously, that strategy has worked well."

RedLynx adds that many of its games were promoted online via promotional web versions – a key move in bringing key titles to an even wider audience. Free web versions of its games were played over 100 million times.

"This year is looking even better, as we're bringing eight to ten new games to market," said Virtala. "We have experienced teams, strong partners, and a unique development model that lets us significantly expand our offerings while keeping the extremely high quality for which our games are known."

www.redlynx.com

UNITED KINGDOM/UNITED STATES

THQ FORMS DIGITAL STUDIOS

Development teams run by THQ that operate in both the UK and USA have been rebranded under the publisher's new THQ Digital Studios banner.

As part of the strategy, Juice Games in Warrington, UK will be called THQ Digital Warrington. Meanwhile Phoenix, Arizona, USA studio Rainbow will now be called THQ Digital Phoenix. Both are charged with working on new games projects for digital distribution platforms.

New technology developed in Warrington will support the push, which sees both existing franchises and new IPs considered for the likes of XBLA, PSN and iPhone. The first games from the effort are most likely to make it to market next year.

THQ plans to implement "a portfolio-wide community platform to connect consumers to all of THQ's core games" – echoing Ubisoft's own Uplay network it is building into all its future titles.

However the reshuffle comes at a cost: the publisher said 60 jobs in total will be lost from the two studios as part of the new strategy.

www.thq.com

UNITED STATES

DIGIPEN EYES NEW CAMPUS

Hugely respected college Digipen – well-known for its gaming output – is set to move onto a new 100,000 sq ft. complex in order to consolidate all its courses under one roof.

Currently split over two sites, the move will contain auditoriums, classrooms, art studios, labs, a large work area, library, cafeteria, recreation room and general store.

"This move represents a great point of development for DigiPen and the game industry. DigiPen has been teaching students for over 20 years, and with that valuable experience, we were able to design the new campus to provide the students with the best environment to learn, collaborate on projects, live their daily lives, and be most productive, so that we can provide the industry with the best workforce possible," said Claude Comair, founder and CEO of DigiPen.

"The new campus has been designed to fit DigiPen's unique way of teaching, which balances a very rigorous academic curriculum with practical projects from start to finish."

The school claims to be a growth driver in the local Redmond, Washington technology sector, with the number of game-related companies growing from less than ten to over 150 since the facility has been in the area.

www.digipen.edu

UNITED STATES

DOUBLE DEV DEAL FOR BOOK-TO-GAME PROJECT

Distinguished Californian studio Obsidian will be assisting neighbouring firm Red Eagle on turning Robert Jordan's fantasy saga *The Wheel of Time* into a series of games.

"As a new company, we quickly recognised that we could benefit from supplementing

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UNITY DEAL BUILDS ON NEW LEGO BROWSER GAME SUCCESSES

Unity Technologies has secured a three-year deal with LEGO Group that will see its engine used to develop a number of online games.

The Unity engine already powers powers the LEGO browser game *Star Wars: The Quest for R2-D2*, which is free to play, embedded in the toy brand's official site and is aimed at younger players. Unity was chosen as part of the LEGO Group's ambitions to deliver compelling online content to its fans.

David Helgason, CEO of the increasingly popular middleware outfit, said the deal was testament to the platform's suitability for browser-based content creation.

"We're very excited to be playing such a significant part of the LEGO Group's future web plans," he said.

"We're experiencing rapid growth of the Unity plug-in, with around one million installs per month, and we anticipate that this will grow exponentially as Unity is adopted by more sites and consumers become more familiar with our brand."

www.unity3d.com

small in-house technical and creative teams with a proven third party developer," said Red Eagle COO Larry Mondragon.

Mondragon added that the alliance will improve the project's quality while streamlining development costs.

Obsidian previously worked on titles such as the 2004 hit *Star Wars: Knights of the Old Republic II*, as well as *Neverwinter Nights 2*. The development outfit is currently building the multi-format title *Alpha Protocol*, and was chosen to develop on Bethesda's *Fallout 3* sequel *Fallout: New Vegas*.

www.red-eagle-games.com
www.obsidian.net

NORTH AMERICA

ACTIVISION CUTS 200 JOBS

A number of studios owned by Activision in the United States and Canada have been closed or downsized.

Luxoflux has closed, with 56 jobs lost, while Underground Developments has been shut as well. 50 staff at Neversoft have also been lost while 90 jobs were cut at Canadian outfit Radical. Elsewhere, the RedOctane business, which created *Guitar Hero*, has been merged into the corporate HQ. Activision said it was "realigning our resources to better reflect our slate and the market opportunities."

www.activision.om

Top 10 Developers Chart – January 2009

#	STUDIO	COUNTRY	BEST-SELLING GAME
1.	**Nintendo**	**Japan**	**Wii Fit Plus**
2.	Infinity Ward	USA	Call of Duty: Modern W. 2
3.	BioWare	Canada	Mass Effect 2
4.	Ubisoft Montreal	Canada	Assassin's Creed II
5.	Ubisoft France	France	Just Dance
6.	EA Canada	Canada	FIFA 10
7.	EA Montreal	Canada	Army of Two: The 40th Day
8.	Platinum Games	Japan	Bayonetta
9.	Vigil Games	USA	Darksiders
10.	Traveller's Tales	UK	LEGO Batman

Chart Supplied By: ChartTrack charttrack.co.uk ELSPA elspa.com

SAY WHAT?!?

"12 million doesn't sound like a big number to me. There are a lot of people around the world not playing World of Warcraft."

*That might not be much to you, **Blizzard's Mike Morhaime**, but some developers would kill for a fraction of that audience*

"[In '95 Davidson & Associates] told me they paid $7m for Blizzard. I'm like 'Are you out of your minds? They're like a contract developer!'"

*We bet **Activision CEO Bobby Kotick**, isn't saying that now given World of Warcraft's afore-mentioned massive userbase*

"I definitely have learnt my lesson about over promising. There is a ton of work to do for sure, and the team are working hard."

***Lionhead's Peter Molyneux**, learning to mix both his flare for self-promotion with a nice dash of humble pie on Twitter*

"Is Dante Alighieri laughing, or rolling, in his grave?"

***Dante's Inferno exec producer Jonathan Knight** in his intro to – we kid you not – Dante's Inferno: The Official Book of the Game Based on The Poem*

GAMEHORIZON

C O N F E R E N C E

The GameHorizon Conference is Europe's leading event for international game executives.

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Speakers include

Alice Taylor

Commissioning Editor, Education, Channel 4

Alice Taylor commissions cross-platform educational content for 14-19 year olds to get useful, helpful information to teens via their favoured platforms. Specializes in gaming and playful experiences.

Joseph Olin

President of AIAS

The man who heads up the Academy of Interactive Arts and Sciences. Joseph heads up the DICE summit in Las Vegas. AIAS is behind an annual awards ceremony and the DICE Summit to name but a few succesful related events.

Mark Rein

Vice President, Epic Games

The vice president and co-founder of Epic Games, one of the world's leading game developers and technology providers, Mark is an outspoken and influential individual.

Ian Livingstone

Creative director, Eidos

The creative director of Eidos, a pioneer of interactive entertainment, Ian will be hosting the GameHorizon Conference throughout the two days.

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INDUSTRY ANALYSIS SPONSORED BY Bethesda SOFTWORKS

COMMENT: BUSINESS

Will games subsume everything?

by Nick Gibson, Games Investor Consulting

When I was at university nearly 20 years ago I wrote an article for a local paper about how gaming wasn't just a fad and would grow to become the predominant form of entertainment. My friends read it and laughed; even those that played for hours every day on my Mega Drive.

When I began my career as a games analyst 14 years ago, I began to reiterate this belief to any that would care to listen. However, this was typically met with silence accompanied by a polite but dismissive smile. Far from backing down, my view became more extreme and I evolved my hypothesis to the belief that gaming would not only become the predominant form of entertainment but will subsume all other forms of entertainment media. Since then the games industry has more than tripled in size, undergone a demographic metamorphosis and the dismissive smiles have, ever so steadily, begun to give way to brief contemplative reflection invariably then followed by the same dismissive smile.

In the last few years, my statement has finally begun to elicit some debate. However, I have yet to find anyone that completely concurs. So let me see if I can persuade you.

REDEFINING GAMES

The evolution of the games industry is not just one of appreciating dollar value or units sold. It has precipitated and been accompanied by changes to the definition of a gamer.

The original PlayStation popularised gaming amongst twentysomething males and diversified the industry from its teen and pre-teen market. Peripheral-based gaming such as *SingStar* and *Buzz* resulted in a smaller scale but equally radical demographic shift, widening the games family to include more female and older gamers. This process has been dramatically accelerated by the Wii, DS and casual online PC gaming forcing average ages further upwards and creating greater gender parity.

With household penetration of gaming still 20 points behind TV I believe this process still has a long way to run, but its trajectory is clear: the social acceptability of gaming will only increase. Games may well suffer temporary cyclical dips but will continue to grow, eventually encompassing everyone capable of playing. Getting everyone to play games and play games regularly is not, though, the same as having games devour all other entertainment media. TV, after all, has been both ubiquitous and universally adopted for decades now.

What games have which TV does not is flexibility. The definition and boundaries of gaming have changed beyond all recognition in the last decade; it now spans MMOs and other virtual worlds, motion control and gesture-based gaming, mass-participation gameshows, alternate and augmented reality games. You can even play a game while driving a hybrid car that rewards your environmentally friendly driving with more leaves to a virtual tree on the dashboard. The proliferation of platforms on which games can be played, and methods to access and interacted with them, has accelerated over the last decade and shows no sign of slowing.

Key for my hypothesis is that these changes are enabling a gradually increasing technological overlap with traditional entertainment. Mass participation TV such as the various *Idol*s and *Big Brothers* – built around audiences controlling the outcome – have dominated ratings in recent years. Music games were unheard of five years ago, but a generation of children are now growing up expecting the most popular songs to be released in interactive format. No blockbuster is complete without a games tie-in and developer co-operation with the movie studios is enabling more asset and technique sharing.

> ***"Gaming will not only become the predominant form of entertainment but will subsume all other forms of entertainment media."***

CONTROLLING WHAT HAPPENS NEXT

Whilst the definition of a game and the way in which games are played has changed, the core concept broadly remains the same: challenge-oriented entertainment-based interactivity (or even just entertainment-based interactivity). I believe that, as has happened with pop music, the concurrent development of interactive and non-interactive media will increasingly become standard in other major entertainment media over the next decade or two.

In many respects, the success of shows like The X Factor just represent the latest evolution of video games entertainment

Connected TVs will become standard and, combined with more intuitive interfaces, will enable all 'broadcast' shows to be interacted with. The process of visual media and games development will continue to merge delivering movies and games which are increasingly indistinguishable. Fast forward 20 or 30 years and it is easy to see a future where all major entertainment media has both interactive and non-interactive forms.

I believe that interactive media will increasingly be designed for optional passive consumption allowing, as some music games already do, the media simply to be played rather than interacted with. At this stage, however, why would you develop a separate non-interactive version? Interactivity delivers greater engagement, fun and monetisation potential. Add to this the inevitable ubiquity of games platforms, universal connectivity and social preference for gaming and it is hard to see how games will not eventually dominate all entertainment media, if not become, in some capacity or another, the majority of entertainment media. It is not to say that games companies will subsume other entertainment media businesses, but that gaming concepts and practices will increasingly lead and ultimately dominate all entertainment media creation and delivery.

Do I detect a dismissive smile there?

Nick Gibson is a director at Games Investor Consulting, providing research, strategy consulting and corporate finance services to the games, media and finance industries.
www.gamesinvestor.com

COMMENT: INDUSTRY

Notes on the iPad

by Owain Bennallack

Is the iPad a game changer, or an irrelevance for games developers? Both, depending on your perspective.

More people play games than ever before. Yet expansion at the high-end has tailed off – the economics of interactive entertainment are being reshaped by those who can tap the tiny inclinations that your triple-A licence doesn't reach.

Micro-retailing is providing micro-incomes for small studios to whom it's a windfall, while micro-transactions are delivering multi-million dollar revenues for the likes of PlayFish and Zynga.

I haven't got figures to prove it, but if you picture games as a pyramid – with *Modern Warfare 2* at the top and a million Web games at the bottom – then I suspect it's the base that's widening, like a catwalk model turning pear-shaped.

The iPad will extend this shift – which is really about the Internet, not hardware – just as it's another nail in the coffin for standalone magazine and book publishing. And this shift is the most significant for decades.

In that wider sense, you can't ignore it. But iPad is not a new games platform in the way we used to understand the term, any more than it will save £2 newspapers.

PRE-PADDED MARKET

To paraphrase Bill Clinton: It's the economics, stupid. I warned back in August 2008 that $9.99 iPhone games for all was optimistic, and predicted the saturation to come, adding: "Getting even one per cent of the audience will be a feat. Result – another hit-driven business running to marketing."

Throw enough darts and occasionally you'll hit a bullseye – today the App Store is a battleground of free or $0.99 games, and publishers are turning to in-app micro-transactions in their quest for viability.

The iPad is more capable than the iPhone, which could raise the bar and put a floor under prices – except Apple is happy to flood it with pre-existing iPhone software. That means a tsunami of cheap competition for your iPad-only project, and suggests that Apple for one doesn't think fancy 3D graphics will be essential.

TECHNOLOGY, BUT NOT AS WE KNOW IT

It's not the new DS – it's not even the old iPhone – but iPad is important. As an embarrassed teenager, I once saw Billy Connolly admit to deadening any splashing sounds with loo roll when using a friend's toilet. The audience roared with recognition.

"Imagine if I'd said that and you looked at me dumbly," said Connolly, feigning relief.

Similarly, I'll now admit that I read articles on my iPhone in bed – even in the dark and with company. How embarrassing!

> ***iPad is more capable than iPhone, which could raise the bar and put a floor under prices. But Apple is happy to flood it with pre-existing software.***

What, nobody blushing and turning the page? Exactly. This stuff is becoming embedded in all our lives.

I was surprised a few years ago to find my younger sister and her friends watching TV while sitting with their laptops open on the sofa, engaged in multiple streams of interaction and media consumption. In the Facebook and Twitter age that's already become banally normal – supported by iPhones and BlackBerries. This is iPad's territory. It is not the familiar world of we who saved our pocket money for a Spectrum or an N64, and who hacked our first games in BASIC. Most people don't want to know how to use technology – they want to use it. Most people don't want to buy a games machine – they want to play games. Most people don't want to be 'gamers' – they want to have fun with their friends.

Because most people are like that, the iPad will be a success (and there's lots more technology like it to come). The iPad won't make money for any big British game developer you've heard of, but most people who own it will play a game.

Yes, there will always be cutting-edge games, just as we still have theatre and hardback novels. But asking what the iPad means for the mainstream industry is like asking what Spotify means for opera.

Just as music became pervasive and ubiquitous in the late 20th Century, even as music publishers withered, so will interactivity – and gaming – in the 21st. But don't expect to get rich on it by applying the business models of yesteryear.

While the iPad rides a cultural wave that means almost anyone will buy a game, don't bank on it propping up your business

Owain Bennallack is executive editor of *Develop*. He edited the magazine from its launch until its February 2006 issue. He has also worked at *MCV* and *Edge*, and has provided consultancy and evaluation services to several leading developers and publishers. He is also chairman of the Develop Conference advisory board.

INDUSTRY ANALYSIS SPONSORED BY Bethesda SOFTWORKS

COMMENT:

Peripheral vision

by Billy Thomson, Ruffian Games

Over the course of time, the way that players have interacted with games has altered dramatically. We began with simple knobs and buttons before moving on to trackballs, joysticks and joypads, then to keyboards and mice, and still further the current generation of console controllers – and now you can even use gestures and voice to control games.

For a long time games players were more than happy with a controller or a keyboard and mouse, but over the past few years there has been a definite shift in focus of how publishers want players to interact with their games. It was probably the release of the EyeToy that first highlighted that there was a potentially massive untapped market made up of people who normally avoided games like the plague, most likely due to their fear of the level of skill required to play your average video game.

Most games players don't realise just how much skill it takes – just ask your mum to join you in a game of co-op *Call of Duty* and you'll bear witness to just how cack-handed the average person is. This is where the EyeToy bridged the gap: no longer did your mum need to use twin stick control to move and aim at a target, fire her weapon then throw in a grenade and duck behind cover to avoid the blast. All she had to do was jump around the living room flapping her arms about like a muppet. In an instant a new breed of games player was born.

TOY STORY

At first, the EyeToy seemed like it was going to be amazing. Only after about half an hour did you realise that it was horribly flawed, and that any game created for it would basically fall apart in your flailing hands if you didn't play it exactly as the designers intended it to be played. It seemed like the EyeToy had failed and this new breed of games player – regularly referred to as the 'casual gamer' – would need to wait to become the dominant force in the gaming market.

Nintendo clearly had their eye on these casual game players and they focused the Wii entirely around catering for them. Initially I was fairly sceptical about the Nunchuck and Wi Remote controllers; I could see the potential but without trying it I wasn't convinced. Within minutes of playing for the first time I had the feeling that Nintendo were back to their best, but I didn't have any idea just how successful the Wii would turn out to be.

Microsoft's new Natal peripheral is on course to be a success – just don't expect it to replace 'normal' gaming input methods

Since the massive commercial success of the Wii it seems to me like Sony and Microsoft are now both chasing the casual market in a big way. Sony seems to be a fair bit behind with Microsoft looking like they could be on to a winner if Natal works out for them.

Personally my favourite controller of all time is the Xbox 360 controller. It's the right size, the buttons are nice and spongy, the sticks feel solid and rightly take precedence over the D-pad, the analogue triggers provide the right amount of resistance and the bumpers are easy to get to without giving you RSI. For my money it's easily better than the PS3 controller.

> ***"In ten years time I may well be proven wrong, but I personally don't see how hand gestures and voice control will ever replace the controller or mouse and keyboard."***

EMOTION CONTROL

As for Natal, I've yet to see it in action and while I'm sure there will be a plethora of great games available for it in the next year or so, I know I'm still going to want to play the same type of comparatively complicated games that I do right now. I just don't think I will ever truly fit the 'casual games player' demographic – I've been playing games for so long that I want and fully expect my games to be complex, not intentionally simple.

In ten years time I may well be proven to have been incredibly short sighted, but I personally don't see how hand gestures and voice control will ever replace the controller or mouse and keyboard for games that contain characters that perform vigorous forms of physical movement. How can waving our arms around or shouting commands translate to a compelling, rewarding experience when it comes controlling a team of eleven players in a football game? Or running around a detailed 3D environment navigating the terrain and taking on intelligent enemies in armed combat?

For these and many other reasons I think the good old controller, mouse and keyboard have quite a bit of fight left in them, and while I'm excited about what Natal and Nintendo have to offer in the coming years I'm actually quite pleased that all those years spent mastering the skills it requires to use these stick and button based peripherals will not turn out to be a total waste of my time.

Billy Thomson is the creative director of Dundee developer Ruffian Games. Billy has over 13 years experience of designing video games, including design roles on *Grand Theft Auto* and *GTA2*, before working as lead designer on Realtime Worlds' celebrated *Crackdown*.
www.ruffiangames.com

COMMENT: DESIGN

Keep it simple, stupid

by David Braben, Frontier Developments

We are very lucky to work in such a new industry. Our sector is one of the few where there is a great deal of positive discussion and exchange between us, even though we are, let's be honest, competitors. This is not the case in the film business, for example. Nevertheless, you go into a retailer, and you see ranks of DVDs and Blu-rays in identically sized packaging, where the consumer knows exactly what to do with each one – just stick it in the player. Okay, there are slight menu variations, and different numbers of irritating disclaimer screens on the discs, but essentially the process is the same. Until this year, that was substantially true of games, at least console games.

This year, we have seen the first glimmers of what may be a new trend in our industry – services that give 'added value' on a per-publisher basis, where the first user of a game gets some extra functionality or a 'free' membership via a long one-time alphanumeric code that has to be entered using the controller. I've seen half a dozen such console games already, and each does it in a different way.

NUISANCE BEHAVIOUR

This fragmentation and complexity is unlikely to be helpful to the industry as a whole, especially if it migrates into a requirement rather than an added extra – i.e. online account-based game verification via a code. Some services will require a network to validate on first purchase/installation, others may require the network always-on. This complexity will simply be used as an excuse to justify piracy, and will be a bar to the broad experience-seeking audience – in fact to all but 'core' gamers – if you have to go through a different, lengthy and complex installation process each time, involving 25-digit codes, creation of an account and password, and other nuisances.

We are, apparently, trying to reach out to that same broad audience that Nintendo reached so well with Wii, with great new technology like Microsoft's Natal and Sony's motion controller. It is as if we collectively aren't thinking about all this as a whole. We have a gun, and we are pointing it at our own feet.

The alternative is a cross-market or at least platform-based solution to registration. The best solution – unique discs – is currently blocked by retailers, as they understandably fear losing their 'free ride' of selling used games as new, so they need to be considered as part of the equation. At the very least, if we were to bring in serialised discs, this can be used to attach a disc to your account automatically, obviating the aforementioned annoying codes to get 'free stuff'. It can also be used as a block to piracy down the line, which is already an issue on some platforms, but let's get the process in place now.

A move to serialised discs would help developers dodge the pre-owned bullet and simplify DLC

> ***Even for people like with a good familiarity of the issues involved, the process of PC installation is hateful – you might need new drivers which in turn breaks something else.***

We have already seen the damage fragmentation has caused on the PC. Even for people like me in the industry with a good familiarity of the issues involved, the process of PC installation is hateful, knowing full well a game may for example need new drivers, which in turn breaks something else – and if you want to use a laptop, forget it! Steam is a good solution to a part of the problem, but only because it is a one-stop shop. If there were five or ten different such services, would you bother?

SERIAL OFFENDERS

So to sum up, let's move to serialised discs now, as an industry. We should all agree that it will not be used to prevent pre-owned at the current price point, but to give added value functionality to the first purchasers.

This also opens the door to 'for rental' discs – something I have banged on about for ages – at a significantly higher retail price, as with film. It also creates the opportunity to bring in, at a later date, a 'not for resale' version of the game, that does use the code to prevent pre-owned at a lower price point, but still on disc – especially helpful for those people who cannot buy games on line, as they do not have a fast network connection.

Gamers may read this and think that pre-owned discs are a good thing for them. They are not. Without pre-owned, retail prices can come down, and you get to keep the disc.

Also, the 'long tail' of sales of older games will then benefit their creators, rather than the same discs going around, where revenue only goes to the retailer. This is a powerful sales incentive for good, original games, which are otherwise harder to justify making financially.

If the film industry can cooperate then so can we. What do you think would be the consumers' response if you had to enter a 25-digit code as part of a time-consuming 'registration' process whenever you bought a film?

David Braben is the founder of Cambridge-based Frontier Developments. Best known as the co-creator of *Elite*, Braben has contributed to, designed or overseen a number of other projects including *Frontier: Elite II*, *Dog's Life*, *Thrillville* and *LostWinds*. Frontier is currently developing his next title, *The Outsider*. He is also closely involved with Skillset.
www.frontier.co.uk

INDUSTRY ANALYSIS SPONSORED BY Bethesda SOFTWORKS

COMMENT: PRODUCTION

Measuring challenge

by Ben Board, Microsoft

The West Wing, season five, episode three. Thrusting young White House Deputy Chief of Staff Josh Lyman stands outside his office doorway, one palm laid on his sweating and prematurely expansive forehead and one fist on his hip, shouting the name of his PA. He's just received word from the Hill that Senator Drucker from New Hampshire has been seen chatting quietly with Robertson from Ways and Means, and this only five hours before the final reading in the House of a bill which would secure 3,000 jobs for an aircraft manufacturer in Illinois.

Suddenly the action freezes. The jaunty logo for the wireless keyboard that rests upon your lap appears over the background, and spins away into the corner leaving a line of text in large, friendly type, which reads:

"Why is that meeting so significant to Josh? (50 words)"

And below that:

"Using your Intell-e-Judge Answerboard, type the answer to this question now. If your answer satisfies our Intell-e-Judge comprehension software you may continue to enjoy this program. If you are not able to provide such an answer, we regret that your viewing of The West Wing *shall end (sorry, no refunds), and you should visit the Intell-e-Judge Match-Me-Up! website to find suggestions for programming you might find easier to appreciate. Have you tried* 24*?"*

There are seven seasons of The West Wing, 22 hours apiece, and my wife and I have watched them all, twice. We've also devoured *The Wire* (five seasons), *Six Feet Under* (five) and dabbled with *Deadwood* (one and a half). Now, did I understand every plot development, every subtle relationship? Did I appreciate the fine nuances in the threads of the drama? Er, no. But I loved every minute of it. I enjoyed being in the company of these amazing characters, these writers, these actors, and I understood enough of the events to get hooked. Just as I don't need a doctorate in Art History to enjoy visiting the Louvre, it can be satisfying merely to be in the presence of great talent. And anyway, my wife explained the tricky bits.

I played an Xbox game recently that I utterly loved. The mechanics were spot-on, the atmosphere crackled with tension, the visuals were exceptional, and the absorbing story, according to the box, stretched over fifteen missions, but in a week of utter dedication to the game I couldn't get past level three, even on Easy. I'd have absolutely loved to play the other levels. I might even have gone on to buy the DLC. But I can't, because on a charge of Being Rubbish, the Intell-e-Judge has sentenced me to Three Levels Hard Luck.

Last month I wrote about corporate vocabulary, and alongside the 'going forward's and 'let's take that offline's is this contentious word, 'experience'. It's not a game, they say; it's an 'entertainment experience'. Suit-talk, right? Well, maybe, but perhaps the shorter term is better only in that it's seven syllables more wieldy, and perhaps it improves syntax at the cost of semantics: does 'game' imply a need for challenge that 'experience' doesn't?

> ***"There are many ways of making entertaining experiences, and challenge is one of them; but being thrashed soon ceases to be entertaining. I always choose Easy – and if it isn't, I'll move on."***

Describing another game in this context, Ernest Adams imagined how much he'd enjoy wandering through its beautiful forests and sparkling shorelines if only people would just stop shooting at him. There are many ways of making entertaining experiences, and challenge is one of them; but being thrashed by a challenge I can't overcome soon ceases to be entertaining. I always choose Easy – and if it isn't, I'll move on.

To this lamer gamer, at least, it's gratifying to detect a shift. *New Super Mario Bros Wii*'s Super Guide shows the path forward after eight failed attempts. Ubisoft's Uplay system will offer an option for the player to watch a video walkthrough. Some titles sell you items otherwise hard to earn in-game. I hope this is a trend. I'd like to see a game detect that I've died ten times on this bit and ask me if I want to skip forward, or activate quicksaves, or drop the difficulty.

I expect your title has some USP or standout element. So, did players enjoy that feature? Did they even use it? How should you develop it for the sequel? Every studio and publisher that produces a game for Xbox or Games for Windows Live is entitled to see the online data we collect for it, and that includes stats for how many people earned each Achievement. This is the cheapest way to study your audience – coarse, but invaluable. If your title awards Achievements at significant plot points and you haven't seen that graph, talk to your publisher or me – but prepare for some sobering reading. If you want finer granularity and more data on how your game is being played then there are options, such as hidden leaderboards or even XLSP, as I've mentioned here before.

There's no need to assume or guess how players experience your game, how far they get, how much effort to put into that final boss, when you can record real data. Don't be afraid to provide a route other than brute force if you really want people to appreciate your creation in its entirety.

There's nothing wrong with offering complexity the way something like Lost does – but in a game it has the potential to discourage players, not encourage them

Ben Board is European developer account manager at Microsoft, supporting all studios working on games for Xbox and Games For Windows platforms. He previously worked as a programmer and producer at the likes of Bullfrog, EA and Lionhead.

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What's hot at GDC 2010

Going to GDC this year? Packed schedule as usual? Us too – but here's the nine sessions you must make time for…

BRINGING UE3 TO APPLE'S IPHONE PLATFORM
Speaker: Josh Adams, Epic Games
Date/Time: Tues, March 9th, 3pm-4pm
Finally, some more details on Epic's iPhone version of UE3 – including what's stayed and how the popular toolset and engine will go from being Windows-centric to targeting Apple Macs.

RAPIDLY DEVELOPING FARMVILLE: HOW WE CREATED AND SCALED A FACEBOOK GAME IN 5 WEEKS
Speaker: Amitt Mahajan, Zynga
Date/Time: Tues, March 9th, 4:15pm-5:15pm
Anyone who's used Facebook will have either played or had their feeds invaded by *FarmVille*. And yet, it was made in just five weeks – and here Zynga show how they did it.

WHY OWNING YOUR OWN IP IS A BAD IDEA: GIVING UP RIGHTS FOR FUN AND PROFIT
Speaker: Chris Charla, Foundation 9
Date/Time: Sat, March 13th, 10:30am–11:30am
With more and more developers striving to keep their IP, it'll be an interesting argument as to why Foundation 9 has achieved its success by not doing so, and how the conventional wisdom might be counter-intuitive.

FROM METRIOD TO TOMODACHI COLLECTION TO WARIOWARE: DIFFERENT APPROACHES FOR DIFFERENT AUDIENCES
Speaker: Yoshio Sakamoto, Nintendo
Date/Time: Thur, March 11th, 10:30am–11:30am
The *Metroid* and *WarioWare* creator alks about simultaneously developing hardcore-focused *Metroid: Other M* and *Tomodachi Collection* – one of the DS' most popular casual games.

AS LONG AS THE AUDIO IS FUN, THE GAME WILL BE TOO
Speaker: Akira Yamaoka, Grasshopper
Date/Time: Fri, March 12th, 1:30pm-2:30pm
Silent Hill series composer and producer Akira Yamaoka, now of Grasshopper Manufacture, will talk about audio design from a producer's perspective, and what challenges remain for audio designers given technological advances.

THE ART DIRECTION OF BATMAN ARKHAM ASYLUM: REBOOTING A SUPER HERO VIDEO GAME IP
Speaker: David Hego, Rocksteady
Date/Time: Fri, March 12th, 3:00pm-4:00pm
Rocksteady's art director discusses how the team stayed true to 70 years of comics while rejuvinating Batman for HD, using visual narration and control of lighting and colours.

AMONG FRIENDS – AN UNCHARTED 2: AMONG THIEVES POSTMORTEM
Speaker: Richard Lemarchand, Naughty Dog
Date/Time: Thur, March 11th, 1:30pm-2:30pm
It was universally one of the biggest games of 2009, and here co-lead game designer Lemarchand will discuss how the team of 100 created its most ambitious title yet, plus the crisis points they faced and overcame.

THE CRYSTAL MYTHOS AND FINAL FANTASY XIII
Speaker: Motomu Toriyama, Square Enix
Date/Time: Fri, March 12th, 1:30pm-2:30pm
Toriyama, director of the highly-anticipated *Final Fantasy XIII*, will here discuss how they created the 'Crystal Mythos' that not only underpins *FFXIII* but future titles, plus how they designed its characters, the world and drama.

WHERE DID MY INVENTORY GO? REFINING GAMEPLAY IN MASS EFFECT 2
Speaker: Christina Norman, BioWare
Date/Time: Sat, March 13th, 9:00am-10:00am
Much praise has been heaped on *Mass Effect 2* for improving significantly on its predecessor, and here lead gameplay designer Norman discusses how they overhauled systems without alienating fans of the original.

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BETA

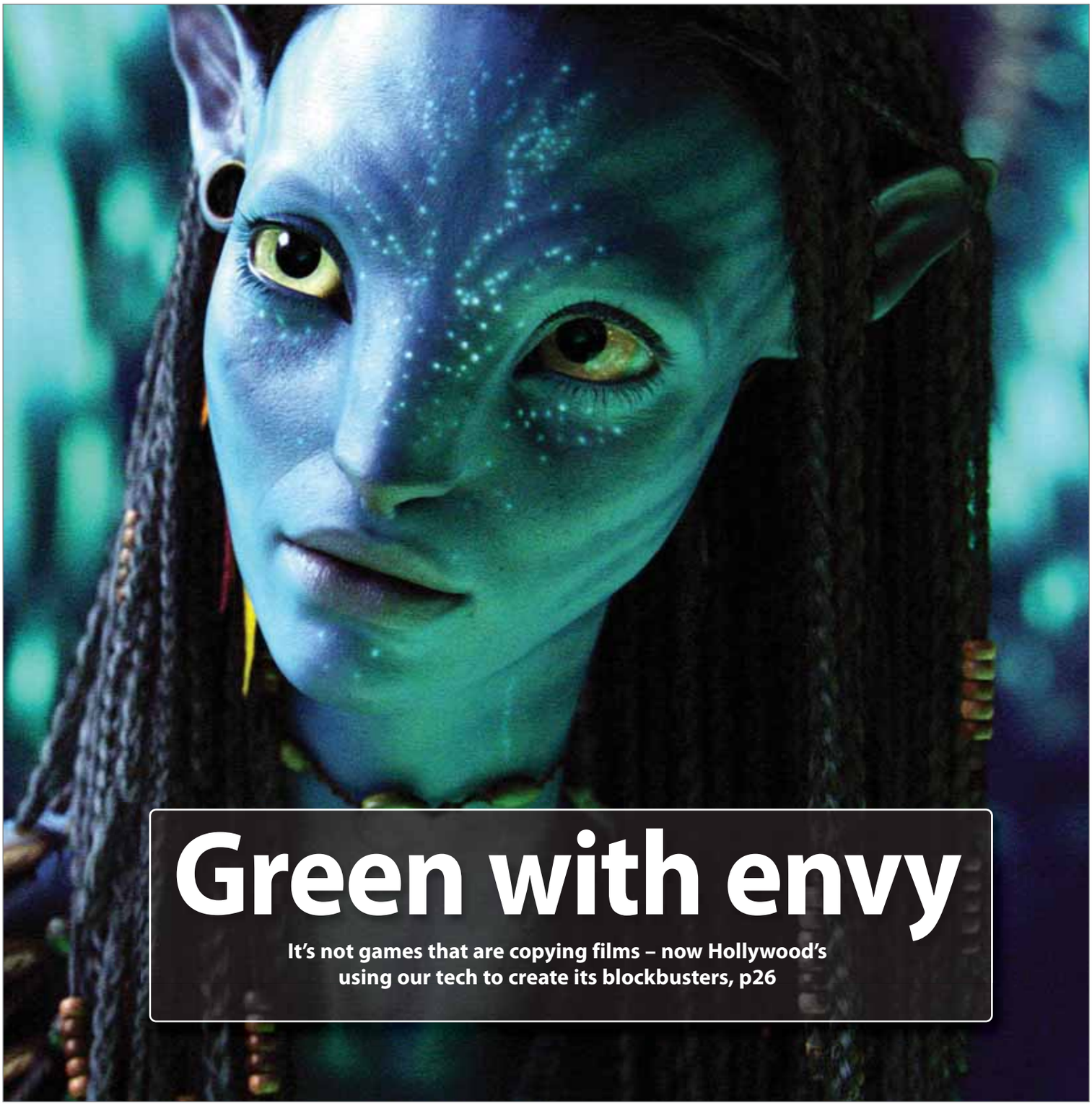
DEVELOPMENT FEATURES, INTERVIEWS, ESSAYS & MORE

"Simultaneous worldwide release needn't be a tantalising vision…"
QA and Localisation forum, p33

Stereoscopic 3D in practice
p30

Testing times for DLC
p36

UX testing for games
p43



Green with envy

It's not games that are copying films – now Hollywood's using our tech to create its blockbusters, p26

Game engine tech was integral to the creation of the Avatar movie

Lights! Camera! Interaction

We've all heard of games becoming more like films. But the parallel production of James Cameron's Avatar and its Ubisoft-developed counterpart seems to suggest to **Will Freeman** that it is the movies that are starting to become like games...

Since the days of the laserdisc and titles like *Dragon's Lair*, the industry and public have been spoon-feeding one another the notion that in a near future developers will be creating games that are increasingly like 'interactive movies'.

It's always been a vaguely nonsensical forecast thanks to the entertainment sector's own uncanny valley. After all, games are works of interactive entertainment, while films satisfy an audience that is entirely passive; one will never really be like the other. The recent arrival of *Heavy Rain* has done much to reignite interest in the concept of dynamic narrative and the player as storyteller, but more zealous observers are noticing a very different paradigm shift in the relationship that Hollywood shares with Silicon Valley.

Could it be that films are becoming more like games? To answer this question, it's important to find a case study that perfectly demonstrates the crossover between developing games and creating films, and *Avatar* makes for the ideal example.

A TWO WAY STREET

The *Avatar* movie, which is the most successful cinema release of all time in terms of box office gross, was accompanied by its own game, developed by Ubisoft Montreal. Both film and game are built using a great deal of related technology, both support viewing in stereoscopic 3D, and both had acclaimed director James Cameron on board.

Speaking to those involved on either side of the fence that separates *Avatar's* game designers from the film's cinematographers, it's apparent that the technological overlap is more significant than you might think.

"It's been maybe 10 years I've been working in the video game industry, and this is the first real time that I can see that there is a huge

Ubisoft's Xavier Rang (left) and Lightstorm Entertainment's Nolan Murtha at the Imagina 2010 conference

> ***"I think it's much more reasonable to say that, from a technology standpoint, films are starting to become a lot more like games."***
>
> Nolan Murtha, Lightstorm

willing from people as successful as James Cameron and Ubisoft to make something this great together," reveals Ubisoft Montreal's own animation project manager Xavier Rang, speaking to *Develop* at the Imagina 2010 graphics conference. "That means the sharing of assets and sharing the way we are working with the tools. That approach is the future of the games industry."

Rang's not alone in his enthusiasm either. According to Nolan Murtha, digital effects supervisor at the Cameron's movie studio Lightstorm Entertainment, the famed director is besotted with game development.

"I haven't heard of asset sharing where the people who are actually creating the movie are sharing assets with the people who are creating the video game to this level," he said. "I really don't know of any directors who have played such a large role in, I wouldn't say creating the game, but in guiding the game. [James Cameron] just let the designers develop what they thought was a good game with a good story, but he still directed, and provided input and was available for questions and concerns when those kind of things came up. That allowed *Avatar: The Game* to be much more unified with the movie. It allowed the game to be much more than a carbon copy, and allowed for the expansion of the universe."

Anyone who has spent even a small amount of time in the games industry would be within their rights to dispute such claims as overenthusiastic marketing speak. They are certainly the kind of claims we've heard before, but it really does seem that the *Avatar* game and film shared a remarkable synergy throughout their conception, and the relationship between the two grants us a glimpse of how much time studios in the development sector might be set to spend with their celluloid cousins in the near future.

Games makers working on film tie-ins have long had access to concept art, early script drafts and other preview assets, but now it looks like studios can start to expect that process to reverse. Hollywood is coming, and it seems to want our tech.

HE WHO SHARES WINS

"We took the sharing very far," says Rang. "So far in fact, that in Montreal we created what we called 'The Bunker.'"

The Bunker was Ubisoft's solution to the security issues that needed to be in place to allow a special internal network linked with Cameron's own network. The closely guarded set-up enabled the Montreal team to receive all kinds of material, from models and reference charts to concept art, confidentially.

"We really got everything," enthuses Rang. "Normally when you are concepting this kind of thing you have to do a lot of research, and a lot goes back and forth between technical teams to see how it works. But with *Avatar* all the work had been done, and the only question was 'With the tools available to the games industry, how do I recreate that?'"

It's a tough question to answer, but Rang wasn't alone in pondering what could be learned from his new colleagues in a parallel sector, and some of Ubisoft's assets even made it into Lightstorm's capable hands. Over on the film set, there's a sentiment that much can be learned from games.

"It's interesting to consider that games are becoming more like films," suggests Murtha. "But I think it's much more reasonable to say that, from a technology standpoint, films are starting to become alot more like like games. Filmmakers need to watch the expansion of the universes that are currently available in games – especially the sandbox games like *GTA* and MMOs like *World of Warcraft*.

"The way players can create their own lives within the game; a movie can't give someone an experience like that. Sure, it's a different experience, and people can have very profound reaction to films, but games offer hundreds of hours of playing time while a movie provides two-and-a-half to three hours. Filmmakers can learn a huge amount from those worlds."

CAMERA OBSCURA

Murtha's comments present an interesting perspective from the other side of the creative divide between building content for passive viewing and conceiving works of interactivity, but thus far they are purely academic. Still, there is a more practical way films are learning from game developers.

Much of the *Avatar* movie's content, which is prominently presented in graphical form, is based on that now long-standing industry

In the wake of Cameron's CG movie, games developers might be spending a lot more time with their Hollywood contemporaries

stalwart motion capture, but no longer is that where game and film technology rub shoulders most vigorously.

When filming *Avatar's* motion capture scenes in a sprawling facility draped with cameras and computers, Cameron armed himself with what was named the 'virtual camera'. Effectively an augmented reality viewer, the virtual camera was fitted with a screen at its rear. Pointing the device around the aesthetically blank set Cameron could see in his viewer a real-time version of how the final movie would look, giving the director of a CG work live feedback for the first time ever. And the tech underpinning Cameron's magic box? A system based on game engines.

According to Murtha, Cameron is fascinated by game engines and the opportunity real-time technology designed for development studios can offer the games industry.

"There's so many ways films are becoming like games," says Murtha. "That's especially true in the real-time virtual production pipelines that are going to be cropping up throughout different filmmaking areas. I think utilising a lot of the game engine technologies such as transparency maps, sprites, full visual effects and a number of very processor inexpensive tricks are really going to enhance directors' ability interact with CG content.

"Traditionally directors have had to wait months and months to see what's going to be on the green screen, and they've been struggling with that problem for years. It's actually really detracted from and swayed some of our more creative and best directors, some of whom have previously avoided the CG medium because the tools aren't there that are in place for makng live action films.

"They want to have control, and merging video game and filmmaking technology is allowing these directors to come in and control the CG elements of their films."

Exciting stuff, but from where Murtha's standing it seems like only those working behind the silver screen are set to gain from the increasing overlap of film and game technology. But Rang adds that he too sees games and films approaching each other with an equal velocity.

"I certainly agree that movies and films are moving closer in that way," confesses Rang. "Today everybody can access the technology to create games, and create some really great first and third person-shooters and such. Now everybody can do that, things like narrative are becoming more important than ever. Interaction with narrative, like that which we find in *Avatar*, is part of the next step."

> ***"We want to bring more people to us from the movie industry, like storyboarders and scriptwriters."***
>
> Xavier Rang, Ubisoft Montreal

HIRE AND HIGHER

It seems Rang isn't the only Ubisoft staffer who recognises that what films and games share can become a more significant two-way relationship. In fact, according to Rang's suggestions, there's more developers can take from Hollywood's lots than technology.

"We want to bring more people to us from the movie industry, like storyboarders and scriptwriters, just to be sure that we can tell a really good story. We need to move on from checkpoints and missions to something that is far more complex narratively."

So far everything sounds just rosy, but to ignore one glaring discrepancy between games and films is to turn a blind eye to a major gulf between the mediums.

By definition games must hand the reigns to the player, but in doing so they make a huge aesthetic sacrifice, and when they carry the brand of a groundbreaking CG film, it puts an immense pressure on the developer.

"There is a pressure there, but that pressure is really important," insists Ubisoft's Rang. "We know that we don't have the same tools as the movie industry, and that there's a certain quality we can't match at the end. That pressure makes us find a way to give an intention, and to take all the resource we can to deliver the highest quality we can with the tools we have. After that there is only the fact that we have to accept that we won't match what we can create today with the CG quality."

"That's true," interjects Murtha, as he and Rang start to debate the relative merits of one another's industies. "But despite that sacrifice the game really provides a role that the audience can play, and in that regard it leads the film. Obviously the graphics and the computer-generated content in *Avatar* are definitely groundbreaking, and certainly it's the best that there has ever been.

"You can certainly be immersed in the movie, especially when watching in 3D, but in the video game, even without the same aesthetic and the same detail, you are involved and affect changes. That's important. Our film audiences can't affect changes."

THE TWILIGHT ZONE

Of course, there's one area where filmmakers and developers occupy a far more familiar footing. While 3D in movie theatres has existed for decades, the new stereoscopic revolution is one that both industries are still testing the water of. It just so happens that *Avatar* is the poster child of the huge financial investment in revitalising the concept of viewing in 3D, and both game and film can be seen in the next dimension. But how important is stereoscopic display to the professionals who have spent so much time with it?

"For me there are many layers of immersion, and we try to provide as many as we can in a game," reveals Rang. "To provide this extra experience, letting players enjoy the game on a good TV with 3D technology, adds another layer of immersion. However, without 3D you can still feel the game."

"I agree," says Murtha quickly. "From a filmmaking perspective it's a very similar situation. I don't think a movie can rely on whether it's in 3D or whether it's a traditional 2D film. I think that using 3D you need to make sure its about using the technology to help tell the story rather than making the film or story about the effect."

Tentative words then, from the men at the zenith of a new direction for big budget entertainment media. Clearly Rang and Murtha respect the considered approach needed to harness the potential of 3D.

An intensified approach to technology and staff sharing will be essential if the stereoscopic dream is to become a reality. Working together towards that goal might become the means to a greater end that sees the creation of games and films overlap in a way that far outperforms the potential of the hackneyed concept of an interactive movie.

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The next dimension

With Avatar showing audiences what the next generation of film can do, stereoscopic 3D is hotter than ever. But game developers are in danger of turning people off by over-doing it, says Blitz's **Andrew Oliver**…

Whenever a new technology emerges in this industry, there's a whole world of design considerations to take into account. 3D is no exception. A badly designed game that fails to make the most of the opportunities available will do more damage than good to the overall perception of 3D.

Consumer opinion has already been somewhat skewed by the often inferior 3D effects of the past. Although there has been a lot of press either for or against 3D in games, it's not been made clear that we are yet to see what the technology is capable of, and that we should hold off judgement until the medium is more mature. There are more possibilities available to developers now than ever before and, as an industry, we should capitalise on them and not simply go for gimmicky or obvious effects. It can make a world of difference to the player's immersion.

One of the most frequently-made errors when incorporating 3D into a game is the effect of throwing things out of the screen at people. It may be fun the first time you see it, but it grows old very fast. On top of that, it can be uncomfortable to watch for any length of time.

More attention needs to be paid to using 3D where it already works, and where consumers already have experience of it: for example, the advanced Hollywood model where 3D is used to give more depth behind the screen. When used like this, it can greatly improve the player's immersion in the game.

PUT EFFORT INTO EFFECTS

To get a 3D effect, two views – one for each eye – have to be rendered at the same time. But there's much more to creating an immersive and fun 3D experience than simply sticking two cameras in. Again, it's necessary to look to Hollywood for inspiration, where they make scenes larger than life for a cinematic effect. An awful lot can be done with artificial tricks. For example, when a mountain is seen from far away it looks flat in real life because images become parallel over distance, and therefore the view each eye sees is the same – hence, in real life we do not see distant objects in 3D. In 3D games, each eye is given a slightly different view, which gives an object in the distance a detailed and 3D effect.

> ***"3D can go a long way to augment a player's experience. There's going to be a learning curve for the industry, but this will settle down as the format matures."***

One problem is the fact that it's incredibly easy to break the illusion of 3D. The more 3D cameras move around and force the viewer to repeatedly refocus, the more they may experience headaches and nausea.

Developers should also consider the viability of the genre. 3D shouldn't be piped into every game just because it's the latest technology. In fact, some of 3D's detractors complain that it just doesn't work for some games, and we'd absolutely not disagree with that.

We just want people to be aware that 3D can go a long way to augment a player's experience in certain instances and shouldn't be ignored. There's going to be a learning curve for everyone in the industry, but this will settle down as the format matures. The difference between existing TV models can be alarming; the effects on the readily available cheap technology aren't great and it's a shame when people think that's all there is. We need to be aiming at the top end of the market and then the technology and games will filter down to the mass market.

In 2009 Blitz Arcade released *Invincible Tiger: Legend of Han Tao* for XBLA and PSN, which was the first stereoscopic 3D game on the market. There are lots of different reasons why we chose this game, including the fact that it was a relatively easy one to start with. As a studio we learned many lessons from designing *Invincible Tiger* – for example, it's possible to guide the eye around the scene by making areas of natural focus. However, expecting people to look around the screen all the time can be awkward if the game isn't designed correctly.

The game genre lent itself perfectly to 3D; it meant we could pick something that we felt would genuinely be enhanced by the technology. Through this we hope to show people how – when used correctly – 3D can add a huge amount to a gamer's experience.

Games take a year or two to write, and the lessons we are learning now have not yet been seen in the marketplace, but we've already made several fundamental changes to our pipeline and BlitzTech engine ready for our next 3D games.

ONE SMALL STEP FOR MAN

Ubisoft's *Avatar* game release was another major step forward for 3D, on the back, of course, of the hugely successful film. Despite having to pay more for the experience and having to wear glasses, there appears to be few reports of people suffering from any ill effects from watching a full-length 3D movie. It's fantastic that Sony is taking 3D seriously, as this will form the basis of a major step forward towards public acceptance.

Also, I think the upcoming launch of 3DTVs by many manufacturers will provide another leap forward for consumers to realise that it is possible to enjoy cinema-style stereoscopic 3D in their own home. Most of all, we need to see this as a learning experience and continue to be as open as possible to the possibilities inherent in 3D for the games industry as a whole.

Andrew Oliver is CTO of Blitz Games Studios which he founded with his twin brother Philip in 1990. In his role as CTO Andrew leads the studio's interal R&D, proprietary technology and game direction.

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Goingloco

What are the major challenges facing localisation firms today that developers need to be aware of? To find out, **Develop** quizzed key companies in the space…

Have you seen more demand for simultaneous worldwide releases in the past year? How do these affect the QA and localisation process?

Stephanie Deming, *President and Co-Founder of XLOC:* The desire is certainly there to open up these territories. Any simultaneous worldwide release greatly benefits the publisher and developer.

In terms of the QA and localisation process, the more languages you have, the more you need to have an organised process for the simultaneous development. There needs to be good synergy between development, production, translation and QA – as the flow of assets consistently changes towards the goal of release. Communication, organisation and a systematic process that everyone buys into is key. It pays to collaborate with the experts and assure that a seamless process can be mapped out, managed and implemented.

Keith Russell, *VP Sales and Marketing, Babel Media*: Oh yes, more and more publishers going for the Holy Grail of sim ship. it's not rocket science; you just need a good localisation process and a dev team willing to lock the English and walk away (and not tinker afterwards). Not everyone can do that.

Alastair Harsant, *Games Business Line Manager, Testronic Labs*: The QA process is essentially modified: On the face of it, working on multiple SKUs across platforms simultaneously increases scheduling, coordinating and resourcing needs due to volume. However, working on all languages at the same time gives volume throughput. Compared to staggering the work, we find that the volume, simultaneous approach can lead to great efficiencies.

There is also the potential for day and date film/game tie-ins to become the norm; an extension of simultaneous release of a game worldwide. A QA provider with skills across content types and delivery channels with a pedigree in software testing can provide QA across film, game and marketing websites. The approach of using one outsource company for multiple disciplines gives not only time/cost efficiencies but also allows consistency in process and standards – safeguarding brand identity and the all-important consumer experience across diverse consumption channels.

Christoffer Nilsson, *MD, Localize Direct*: The process has been refined somewhat but, in the majority of cases, localisation still follows the lead SKU as an end of project consideration. Localisation still happens as a large batch of text that is handed over to a localisation company which they then have to turn around in a tiny amount of time.

Keeping localisation towards the end of the development process to a point when a game hits beta or thereabouts has to change. There really is no need to leave it so late. So much of the content is written throughout development so shouldn't it be localised and tested at the same time? I appreciate that there may be some rewriting as code changes during development but surely rewriting and testing some text that takes a few days is better than starting the whole process later on?

Simultaneous worldwide release needn't be a tantalising vision of what we want but cannot achieve. Neither should it be an uphill struggle to narrow the gap between lead language and not. I used to work in game development and experienced all of this pressure at the pain end. The endless documents or spreadsheets, mismatching versions, more information required, etc. This is what spurred us on to develop LocDirect.

Thao Mai, *QA Lead, Anakan*: The schedules for testing in terms of QA as well as localisation are tight anyway, but a simultaneous release would have a big impact, since that means that there is even less time for testing and bug fixing. In most cases when the publishers decide to release the game simultaneously, QA and LT have to deal with a build that hasn't even reached Beta yet.

Due to the tight schedule, testing and bug fixing has to be performed at the same time, but still needs to meet the given deadline. The developers have to sort out the bugs and priorities of their own. In addition, a small amount of bugs gets waived 'as designed' which finally affects the quality of the game.

On the other hand, users are not willing to wait for the localised version of the game. If the original version is released before the localised version is available on the market, they buy the original and not the final localised version.

Andrew Day, *CEO, Keywords International*: Demand is certainly growing for worldwide sim ship. This poses many challenges for QA and localisation as it compresses the work required into tighter timeframes and requires total coordination across all languages.

> ***"Simultaneous worldwide release needn't be a tantalising vision. Neither should it be a struggle to narrow the gap between lead language and not."***
>
> Christoffer Nilsson, Localize Direct

Has the widespread adoption of downloadable content affected the length and practices involved in QA and localisation? Is it a lucrative extra source of revenue for you?

Keith Russell, *Babel Media*: DLCs are like mini-games; each still needs its own project schedule, for example. However, you can save huge chucks of time and cost by using glossaries and translation memories developed on the first title, so it does make them easier to do. They are definitely the way to go because the dev team are happier to lock the English and walk away from the main project, because they know all their other ideas can go in a DLC.

Alastair Harsant, *Testronic Labs*: With more XBLA, PSN, iPhone titles, along with DLC, the testing landscape has changed somewhat. Generally the time spent per project has decreased in this context, but the

regularity of builds has increased. Having the operational agility to deploy teams at short notice to carry out testing is crucial. This type of work, compared to major console disc releases, is becoming a key part of our revenue – and will only continue to increase.

The move to downloadable content from boxed product is a key trend in all entertainment markets, and as a QA provider working across the digital media spectrum it's essential to our business that our knowledge and processes are vanguard in download technologies. Our long-running games business is in console disc releases, but our overall business model, with software/hardware testing divisions alongside games and film, means that we're excited about the acceleration towards download.

It's a great time to be in our business, on the cusp of a new ecosystem for delivering content, and it's a great time for games – download, mobile and online avenues are all widening the consumption base in games and QA companies can only welcome that.

Andrew Day, *Keywords International:* In terms of revenue, they certainly prolong the life span of a project but cannot be considered 'lucrative'. The often small and urgent nature of the DLC update schedules require the utmost flexibility from our multilingual organisation.

Stephanie Deming, *XLOC*: Downloadable content shortens the development time in terms of 'code release' to market. Therefore, the localisation and QA process requires a very systemised approach. At XLOC, DLC is what we provide, so we feel it's been beneficial, and works really well in a publisher environment.

We are also noticing more and more developers that want to self-publish and distribute their products digitally. That movement has changed the economy of providing a service and tool. No longer can they rely on their publisher relationship to ensure full simultaneous development. Instead, developers must figure out their own organisational techniques, develop relationships with external vendors, and educate themselves on what it means to produce a fully localised product. This is a 'cart before the horse' situation where developers may not have surplus funds, so we work with them to achieve their goals through our solution.

Christoffer Nilsson, *Localize Direct*: Localisation has always been a 'as soon as you can please' part of the business. We're well placed, however, in that once you're using LocDirect then you can simply request the additional text you need through the web client. Smaller projects can receive all required translation extremely quickly. Publishers or developers can also check through their translation memory and ensure that any text previously localised is reused.

When you talk about downloadable content there are so many platforms out there. Phones, handhelds, PC, even platforms on platforms. There are so many games out there that aren't sold in physical form, which of course increases the amount of localisation required.

With regards to whether it is a lucrative extra source or not, I would suggest that all text is equal.

Thao Mai, *Anakan*: The trend nowadays aims more and more for the online market. People can download everything conveniently and there are no additional costs arising for the publishers in regard to packaging material. Plus, for most games that do not support downloadable content or updates the user stops being interested in the game after one or two play-throughs.

The advantage of the online market is that the economic lifetime of the game can be extended. This means for QA and LT that these games dispose of additional capacity. The team is already familiar with the game content and the whole workflow which

> ***"Using Joe Public for cheap QA is a myth – what you get are hundreds of random messages, none in a useful format for the development team."***
>
> Keith Russell, Babel Media

makes the testing much faster and easier and of course reduces costs. The disadvantage is that there is no possibility to extend the release.

Has the increased number of 'open betas' performed on titles like Call of Duty, LittleBigPlanet, MAG and ModNation Racers simplified or complicated the process for QA and localisation firms?

Andrew Day, *CEO, Keywords International:* The areas that the open betas focus on are different from and complementary to the scope of our work. Depending on how good the publisher's strategy is in terms of integrating these two phases, it can result in either simplified or more complicated processes.

Thao Mai, *Anakan*: Open beta releases often take place at the same time as the QA and localisation testing. The developers are open for improvements from the user's side, which is great help and good for the quality of the software, but at the same time this could lead to complications within the workflow. The ongoing changes in terms of the design of the games, content, schedules and deadlines would make the testing process more difficult.

The permanent alterations often require updates in QA and localisation standards. Inconsistencies are pre-programmed. The best thing for the QA and localisation process would be that the department receives the beta version which is closed and ready for testing. However, we are always open for any improvements concerning video games.

Christoffer Nilsson, *Localize Direct*: I believe it has complicated the process as there is now an additional layer that must be included in the development process. Creating an open beta currently requires an interruption to the development cycle and creates additional work for stakeholders in the process. For developers that started the localisation and loc QA process early and involved their localisation partners, this can be relatively painless for all involved and actually help the process going forwards, as part of the game already will be localised. The complication many experience is to track and update assets that may change from beta to release, and to ensure consistency.

Stephanie Deming, *XLOC*: I think this depends on the developer and how they respond to feedback from open betas. The goal of open betas is to test the market and see the consumer response, so the feedback is incredibly valuable. However, if the full direction of a game is changed, new assets written, new levels produced and new VO recorded pretty late in the development process that can have a very significant impact on both the localisation and the QA process. Text is one thing, but re-recording voiceover can be incredibly expensive, when doing so for many languages.

So, changes need to be done very thoughtfully – with an understanding of how those changes will impact costs. Many times, those benefits outweigh the costs, which are justified – but it's certainly an important part of the decision-making process.

Keith Russell, *Babel Media*: Using Joe Public for cheap QA is a myth – what you get are hundreds of random messages, none in a useful format for the dev team, many without the steps to reproduce. So what you need is a good QA service that filters all that noise and turns them into correctly written, reproducible bugs for the dev team that can be regressed once fixed. So it hasn't made it simpler or more complicated; it just makes it a different service. Though for high value IP I still wonder if people realise what they are putting out there.

Alastair Harsant, *Testronic Labs:* Mass feedback from the public is a fantastic idea in principle to capitalise on free testing and stressing servers. The flipside is that it takes time and skill for the teams to digest all the bug reports to effectively then implement the required fixes.

In a landscape where development cycle times are ever-decreasing, the teams involved with the feedback also need time to coordinate and implement the changes – you need to be very clear on the priorities.

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Digital quality

How has the proliferation of downloadable content changed practices within the QA industry? Testology's **Harrison Baker** looks at how processes are evolving – or aren't…

Testology has worked on a number of high-profile DLC focused titles – most notably Sony's LittleBigPlanet

Technology has an influence on many of the world's leading industries, its advances sending progressive shockwaves through all of the entertainment sectors. However, the video games industry carries the burden of a technological expectancy: consumers demand not just creative innovations, but also those with technological foundations.

In the past few years these technological improvements have been more closely associated with accessibility and casual gaming. In addition, the internet has become an invaluable component of the console market, with stores offering affordable gaming and, perhaps most significantly, downloadable content.

The generation of the 'downloader' has been transformed into an intrinsic part of the gaming experience (with downloadable iPhone applications and games rejuvenating the mobile market), an awareness of which has been capitalised on by development studios and publishers.

CONTENT IS KING

Downloadable content has been a rising star for the 'post release' sales opportunity. This has rippling effects through the development process: when games are released they typically still have unrestricted scope for further content – bringing into question the term 'content complete' – extending the role of QA departments.

Testology has worked on many titles that exploit the potential of DLC –most notably Sony's *LittleBigPlanet* – combining a sweeping range of content, from customisation packages to levels and features. Being a relatively new implementation of the development cycle, DLC presented itself as a new challenge.

> ***DLC extends the development process, so the priority is always to ensure fluent implementation into a released and working title.***
>
> Harrison Baker, Testology

Perhaps one of the most significant considerations of DLC is time. DLC extends the development process, so the priority is always to ensure fluent implementation into a released and working title. It's important not to disregard the processes that you utilised during the 'pre-shipping' period. The testing day goes on as normal with DLC being treated like any other new feature.

Further, it's important that our teams thoroughly test all areas and features of the game when DLC is introduced. Even though the game has been rigorously tested 'pre-DLC', we need to ensure that these new features have no affect on the successful functioning of other aspects of the game.

However, the acquisition of DLC also needs to be acknowledged: if you want to ensure complete functionality, it's important to actually acquire DLC as the consumer would. QA is not only focused on the in-game functionality, but the downloadable functionality, and so this process of download and installation becomes intrinsic to the daily routine of a QA department.

Think of DLC like this: it is a new game feature that needs to be treated as such. When amending a test plan document, DLC is incorporated as naturally as possible. There needs to be a relationship between old and new; the content is not viewed separately.

One of the main obligations of a successful QA team is to smoothly translate testing processes between multiple products, formats and acquisition methods, and DLC is no different. It is fundamental to assess any differences – for example the downloading process – and then apply existing, proven testing methods to ensure quality for clients.

NETWORK TESTING

The approach outlined for advances in DLC is also applicable to changes in format and platform. The iPhone, social networking sites and browser-based games have redesigned the concept and possibilities of mobile and casual gaming. The scales of these games is much more modest, meaning the dedication of test time to these types of projects is more sporadic and fragmented.

It seems that the industry is ever changing, but with stable and adaptable processes, QA can function with the same focus it always has. DLC and games on a smaller scale can be scrupulously tested in the same way as the traditional video game.

Products and projects may become more complicated because of modifications such as DLC, but these are only complications, not a call for process redesign.

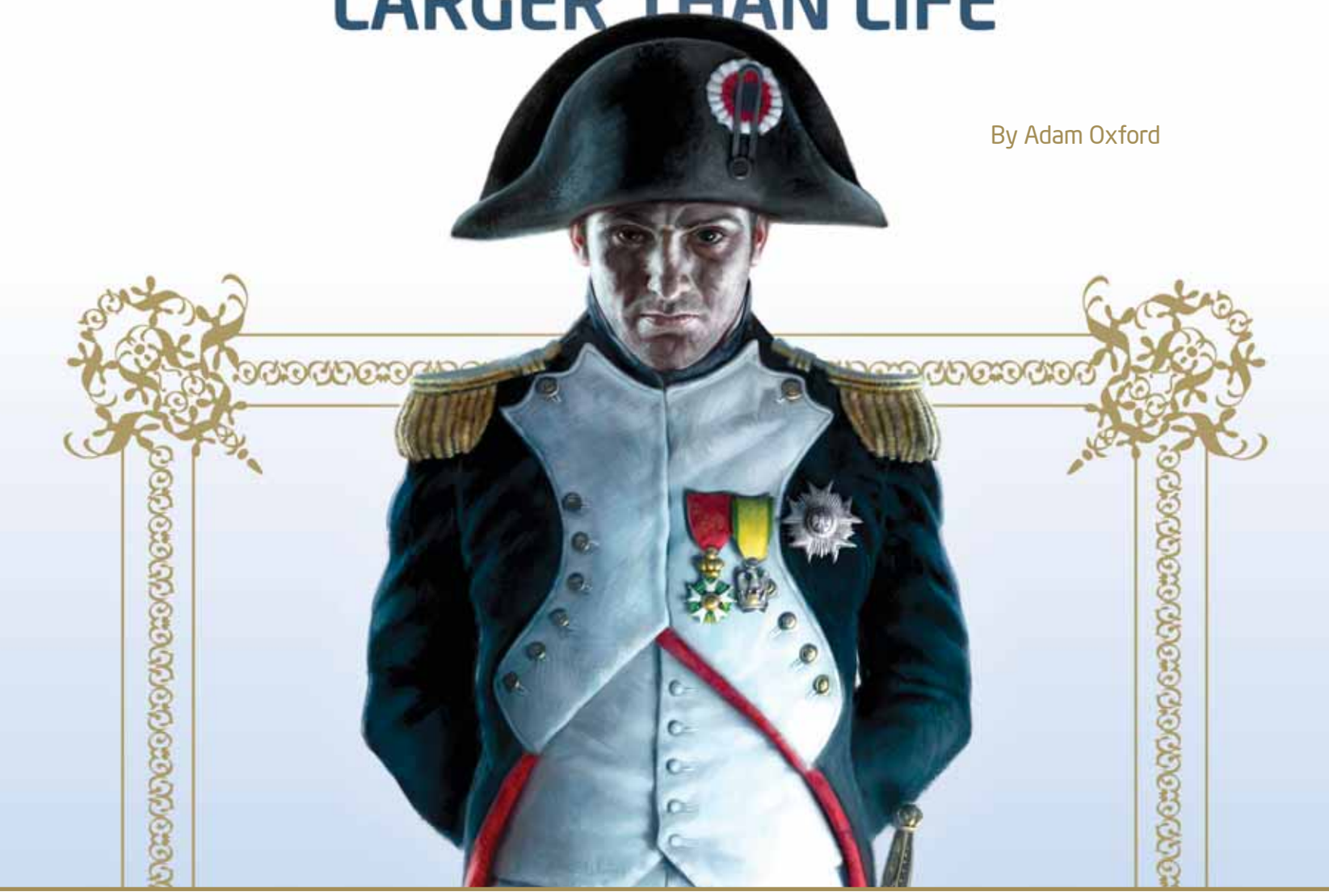
The technological world evolves in an extremely progressive way, but QA seems to handle these changes more than adequately. The video games industry does love to change, but it seems the QA process doesn't need to change as significantly to ensure the same level of service.

www.testology.com

A QA veteran of six years, Harrison Baker was the first member of the Testology team. Currently studying for an English BA, when off-term he still helps out at the firm, where he also dabbles in all areas of business relations.

INSIDE *NAPOLEON: TOTAL WAR** MAKING THE LITTLE GENERAL LARGER THAN LIFE

By Adam Oxford



When *Napoleon: Total War** is released, hundreds of thousands of PC gamers will watch Bonaparte's career crumble in front of the gates of Hougoumont, at their personal Waterloo. When it does, the pint-sized General can take comfort in the fact that he is helping in no small way to celebrate the tenth anniversary of The Creative Assembly's phenomenally successful *Total War* series.

There aren't many games that can claim to have invented a genre. Fewer still have gone on to release an average of one new version or add-on a year, while always hitting critical and commercial success. *Napoleon: Total War* will mark the point at which The Creative Assembly has been at the very top of its game for as long as the Petit General was on top of his.

When the revolutionary *Shogun: Total War* appeared in 2000 it married real-time strategy battles with the slower, turn-by-turn tactical overview battles with the slower,

turn-by-turn tactical overview battles with the slower, turn-by-turn tactical overview of a campaign map. It could have gone very wrong. Blending the resource management and empire building model of *Civilization** with the fast battles of *Command & Conquer** was ambitious, to say the least. Setting the resulting game in a period of Japanese history with which the majority of its potential audience was likely to be unfamiliar compounded the whole project's "experimental" nature.

The creative gamble paid off. And it continues to. *Total War* isn't just still the best example of its genre, it's the only competitor in a race of one and continues to grow its audience with each new release.

"Sales of PC boxed copy has probably declined over the last couple of years," said Creative Director Mike Simpson, "But each Total War game that we make sells a bit more than the previous one, which is a good way to be going."

Enduring War

One of the reasons for the enduring appeal of *Total War*, said Simpson, is the sheer breadth of subject matter that The Creative Assembly can draw on for inspiration and the different ways it can approach a title. So far the company has covered feudal Japan, medieval Europe, the Roman Empire, and the colonial conflicts of the Eighteenth Century.

The biggest departure for the previous release, Empire, was the introduction of naval warfare, opening up the tactical map and adding more variety and new challenges to the battle sequences. *Napoleon: Total War* marks another new direction for the team as they get closer to the characters involved in the conflicts. As the name suggests, there's a heavier focus on narrative and the personalities of the time than seen in previous episodes. At the beginning of the game, for example, players will first encounter the French Emperor as a young captain in an artillery battalion.

"The thing I'm proudest of in Napoleon *is the multi-threaded work that we did on the* Total War* *engine. We can scale to as many cores as the user can provide, so for a strategy game, we're not really CPU bound. This also future-proofs the engine. When the next Intel® processor comes out with 16 threads, we'll be able to utilize those straightaway."*

YURI O'DONNELL, SENIOR ENGINE CODER

YURI O'DONNELL

"We make sure that each game is different from the last one," Simpson explained. "Going from *Medieval II* to *Empire*, we added naval battles, which is like a third game. *Empire* is all about fields of fire and moving lines of guys firing missiles. The previous games were more about getting mired into heavy duty melee."

There's never been a shortage of inventive strategy games with strong historical context, though. What sets the *Total War* series apart is the technical superiority of the engine. From the very beginning, *Shogun* was about pushing PC hardware as far as it could go to create larger and more involving battles than any of its rivals. Since then, the developer has worked hard to stay ahead of competitors.

"Being on the cutting edge of PC technology is really important to us," said Simpson. "The game is all about putting large numbers of men onto the battlefield. The more processing power and graphics power we can devote to that task, the better the game looks. And that feeds into the sense of immersion and directly back into the gameplay."

Size is important for The Creative Assembly, but until it's possible to create a one-to-one depiction of historical battle sites with several human generals per side, there's always room for improvement. One day, hopes Simpson, they'll revisit Waterloo with half a million units and 30 human commanders on each side.

"But that's going to have to wait for the future. It's a big battle as it stands, it's fun, but more is always better," he said.

By one metric, at least, the engine has become literally 10 times better over the decade.

"We started off in *Shogun* with 1,000 to 2,000 units on each side," Simpson said, "Back then the units were just sprite graphics, little 2D billboards. Now, we're doing battles with 10,000 to 20,000 men, each one in great detail so you can zoom the camera right up to them. They're almost up to the same quality as characters in a game with only 10 or 20 on screen at any one time. Each one is doing their own thing, too. So they're animating, their eyes blink, they'll turn around, scratch their ears, they'll talk to their mate next to them and say 'I'm scared'—all things like that."

The individualization of units on the battlefield doesn't just extend to animations. One of the key new tools for *Napoleon: Total War* is a custom unit builder, which allows designers to add details, such as backpacks, pouches, and cuffs, to the models. This enables them to enter a new level of historical accuracy more familiar to table-top enthusiasts.

"You can select your hats, and your coats, and your boots, and then color them all to get the right colors," Simpson explained. "It was really important for the Napoleonic era; people are fanatical about making sure that the cuffs are the right color on particular units, for example."

Natural Balance

Getting the small details right isn't just about pleasing the sticklers-for-detail in the audience. Military history, in Simpson's view, is almost always a "balanced game," and increasing authenticity helps not just with the sense of immersion, but with fine-tuning the gameplay, too. Period maps are drawn the way they are because the borders are the points of equilibrium between powers, and contemporary arms races create their own tech tree for game development without needing a lot of correction to make things enjoyable.

As Wellington himself pointed out after the Battle of Waterloo, it was "the nearest run thing you ever saw in your life." It's not an ideal situation for a General who wants to win a war, but it's exactly the kind of balance a strategy game designer is after.

The heavy customization of individual details that makes that happen has in turn been made possible by the introduction of multi-threading techniques, which first appeared in the previous game in the series, *Empire*. Although it will run on a single-core processor, the game engine has been coded with a dual-core or more target in mind, and is split into two distinct parts: logic and rendering. These routines are then further subdivided into individual "mini-task" algorithms, such as sea geometry refreshes and pathfinding. The idea is that no one process can hold up another and the game can take advantage of whatever hardware is available. It's vital to increasing the number of troops on the battlefield and putting units onto ships for the sea battles.

"The thing I'm proudest of in *Napoleon*," said Senior Engine Coder Yuri O'Donnell, "is the multi-threaded work that we did on the *Total War* engine. We can scale to as many cores as the user can provide, so for a strategy game, we're not really CPU bound. This also future-proofs the engine. When the next Intel® processor comes out with 16 threads, we'll be able to utilize those straightaway."

Multi-threading is still relatively new in game design and far from ubiquitous. Developers still struggle with decoupling routines successfully, and the performance gains are far from a given.

"Writing slow multi-threaded code is easy," explained O'Donnell, "just add synchronization everywhere and off you go. But writing good code that operates at speed, that doesn't introduce race conditions, and that doesn't suffer from cache problems? That is quite difficult."

Right Tools for the Job

From the outset, the team drew heavily on the experience of Intel engineers and the tools they provided when designing the current engine, introduced for *Empire: Total War*. O'Donnell said that Intel® Thread Checker, in particular, proved invaluable.

"It's so easy to introduce race conditions," he explained, "[Intel] Thread Checker basically runs your application under a microscope and validates every memory operation that you're trying to do, notifying you of any simultaneous access to shared memory."

Even more useful are the Intel® Threading Building Blocks (Intel® TBB) libraries that developers can draw on to introduce parallelism to their code. One of the advantages of targeting the PC, rather than writing for a multi-platform audience, was that Intel TBB could be completely integrated into the engine, saving an enormous amount of time and money.

"We considered writing our own job queue system," said O'Donnell, "but we decided against it because the effort of development, testing, and debugging would outweigh any benefit, and [Intel] TBB does the job perfectly. A lot of developers have to write their own job pools largely because they have to run on consoles. We are PC-centric and developing our own thread library is simply not cost efficient. We'd have to spend a vast amount of development effort and time testing to get the same level of quality and polish as [Intel] TBB.

"I'm confident that we wouldn't have been able to ship Empire on time if we hadn't used [Intel] TBB."

Two things drew O'Donnell to [Intel] TBB. First and foremost was the relative ease with which it could be integrated into the existing serial code and second was the speed at which programmers can learn to use it. Within days of first implementing [Intel] TBB, it was yielding performance benefits.

THE CREATIVE ASSEMBLY

Founded in 1987, The Creative Assembly is based in Horsham, West Sussex, and best known for the *Total War series of strategy games. *Napoleon: Total War* is the fifth major release in the franchise and like its predecessors will be a PC-only release. The company has also had major successes in the console market with *Spartan*: Total Warrior* and *Viking: Battle for Asgard**. From 2003 to 2005 the Total War engine was used for the BBC game show, *Time Commanders*, which won international acclaim. In 2005 The Creative Assembly was acquired by SEGA.**

"[Intel] TBB is fairly easy to start using," says O'Donnell. "It's well documented and quite intuitive. The syntax and design decisions that went into it also help developers think about what data is affected by different algorithms. As they write a parallel processor, they need to think about what data goes in and what data goes out, and the chance of introducing a race condition or memory overwrite is reduced drastically using [Intel] TBB. This sort of design policy is what attracted us to [Intel] TBB in the first place. "

Improving the Rendering Process

The efficiency of the engine means that the battlefields and naval encounters in *Napoleon* can be vast and heavily populated, with individual AI routines for every unit. The game is more heavily restrained by the graphical power available than the speed of the processor, which is unusual for a strategy game. In order to reduce the system requirements, the programming team has drawn on another Intel® toolset optimizing their code.

"The second toolset we're drawing heavily on is the Intel® Graphics Performance Analyzers (Intel® GPA)," said O'Donnell. "It's an absolutely awesome graphics profiling tool. What you get as an output is the timing of each API call. You can see how long it took on the GPU and then modify the render state and see what performance impact it would make."

Intel GPA's real-time analysis of the rendering pipeline helps O'Donnell identify graphics pipeline bottlenecks, and spot instances of overdraw in any scene. Additionally, being able to alter shaders on the fly has drastically reduced troubleshooting time for the team.

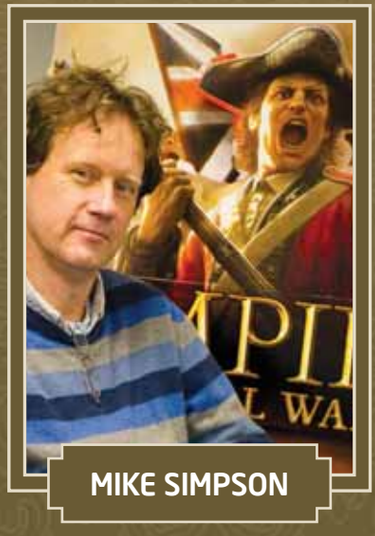
"Just a few days ago," he explained, "we finished a batch of graphics optimization jobs that produced a performance improvement of about 30 percent, just by eliminating two of the bottlenecks that we identified using Intel GPA. The first one was a complicated pixel shader that we were able to simplify quite considerably, and the second one was an unnecessary post-processing pass that we were able to eliminate."

"Although Intel GPA is designed for Intel® Graphics processors, the benefits it brings are universal due to the fact that Intel GPA is a platform-agnostic DirectX* tool," said O'Donnell.

"We see the same bottlenecks, like fill rates or shader complexity, on all the other low-end hardware. Some of them will even appear on the high-end hardware too."

TELLING THE STORY

Narrative has a far stronger role to play in the events of *Napoleon* than in previous installments in the series, which favored a more open-ended approach to historical combat. It's not just the great general himself who will be featured: singling out characters on the battlefield is dictating many of the new features that will be included in the game.



MIKE SIMPSON

"The Napoleonic War is a period which I've always wanted to cover," explained Mike Simpson. "It's one of the first periods which is documented in great detail. You can go down to your local bookshop and buy a book which has a list of everyone who got hurt during the Napoleonic wars. That kind of detail is available, which means there's a huge amount of material available for us to mine to create a game that creates all the uniforms, and the units, the factions, and the characters."

Laptop Friendly

Paradoxically, *Napoleon: Total War* will be the most advanced incarnation of the *Total War* series, and yet boast lower system requirements than its predecessor. Despite all the advances in *Napoleon*, one of the core design policies has been to retain old ways of doing things as fallback paths.

Citing *Napoleon* as an example, ODonnell said: "When we added the support for large unit variation in *Napoleon*, we kept simplified unit rendering for low-end machines. So if you have a large, powerful machine that can handle individual animations for a lot of soldiers, you will get the higher visual quality. On a slower machine, a lot of the soldiers may share animations, textures, and meshes so they won't be as performance hungry."

It's an important philosophy for The Creative Assembly, which recognizes that although PC hardware is continually advancing, laptop sales are in the ascendency, and there's a huge number of potential players out there who aren't able to enjoy the latest games in other genres. Optimizing the rendering pipeline for integrated GPUs therefore fits in with the ethos of being on the "cutting edge."

"When we're thinking about increasing our audience," explained Mike Simpson, "which we always do, we divide it up into the groups that we think will benefit. One of the groups that we really want to reach out to are laptop owners.

Napoleon is one of the first games we've done that should work really well on an average spec laptop, and that's a good thing."

If there's an unbeatable strategy for success, it's making a game a deeper and more engrossing experience, pushing the technical abilities of the engine while at the same time making it more accessible. It's as improbable as an odd mix-and-match of strategy elements based in Japan changing the gaming landscape overnight.

Which is exactly why The Creative Assembly might just pull it off. ■

ABOUT THE AUTHOR

Adam Oxford has been writing about video games and PC technology for over a decade, and has written for PC Gamer *magazine, TechRadar.com, Stuff.tv, and* Edge *magazine. Previously the editor of* PC Format *magazine, Adam is currently a freelance journalist.*

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Experience Points

Games now have to appeal as many people as possible – but how do developers measure the experience? In the first half of a two-part analysis, Vertical Slice's **Graham McAllister** says a focus on user experience could help…

With the cost of game development rising, studios are under increasing pressure to ensure that their game achieves both critical and financial success. The risk of a title receiving unfavourable review scores – and therefore quite likely poor sales figures – may result in the studio's brand being damaged, or worse, studio closure.

To minimise these risks, developers are increasingly keen on investigating new approaches that can help deliver a high quality game on budget. One approach which has steadily been gaining momentum in the video gaming industry is that of user research.

User research (sometimes called playtesting or user testing) focuses on understanding the player; in particular, how they perceive, interact with, and experience a game. It's an umbrella term for the many methods that can be used to understand player behaviour, but broadly speaking, these methods can be divided into two groups: usability and user experience.

Usability comes from the discipline of Human-Computer Interaction and refers to the set of techniques that have aims such as making software easier and more efficient to use. Some of these aims would clearly apply to game development – after all, who doesn't want to make their game more accessible and sell it to a larger audience? However, traditional usability doesn't analyse the enjoyment of playing a game and that's what it's all about: the player experience. This is where User Experience, a group of methods designed to explore the human emotions such as frustration, enjoyment or excitement, comes in.

So why should you integrate user research into your development process? When done correctly, these methods offer a remarkable insight into how a game is going to be played by the buyer, and even how it's likely to be reviewed.

In a study we recently completed, 171 games reviews from August 2008 to July 2009 were analysed with the aim of understanding which aspects of a game were considered worthy of praise or criticism by professional game reviewers. It became clear that the vast majority of issues mentioned were relating to the player experience, not technical issues. The reviewer comments could be divided into four groups:

1. **Usability** – is it easy to understand, menu design, does it behave as expected?
2. **User Interface (UI)** – problems with the HUD, icons, failure to read important text.
3. **Interaction Design (IxD)/Controls** – players cannot issue commands, can't remember them, physically difficult to use or be precise.
4. **User Experience (UX)** – how does it make you feel, signs of frustration, losing track of time, shock, pleasure.

A fifth group could be included which deals with the technical issues (bugs). It's probably becoming clear that user research is not QA – in fact, it's an ideal complement to it. Whereas QA is focused on identifying issues within the game itself, user research aims to identify issues that are between the game and the player. This could be called cognition, experience or interaction, but it's really the mapping between what a game is communicating to the player, and how the player interprets that message and feeds back a response.

> ***"Who doesn't want to make their game more accessible? However, traditional usability doesn't analyse the enjoyment of playing a game and that's what it's all about: player experience."***

Despite the dedication and talent of the development team, it is difficult to predict how the general game-buying public will respond to a game. If there ever was such a thing as the 'typical' gamer, then they have changed drastically in the last five years – casual gaming being one reason – and they're possibly about to change again with new gestural-based controllers such as Natal.

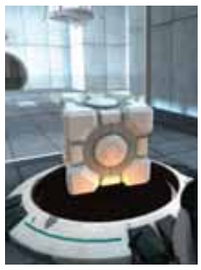
If used iteratively throughout development and not just at the end, user research should provide the studio with the means to correct any unintended player issues, delivering a game which is as true to the original design as possible.

Now that you're hopefully more receptive to the benefits UX testing can bring to development, the next thing to tackle is how you actually go about performing this user research. Unfortunately, there is no standard process which we can just simply apply. It will mainly depend on firstly identifying which questions you want to answer about the game, then choosing the right methods to help get you those answers.

The very first thing that you have to decide is exactly what you want to know; you need to figure out what the aim of your research is. Are you interested in testing the player's reaction to a new feature or control technique? Perhaps you want to compare different versions of the build and get data to help provide a clear path forwards? It may even be the case that you don't know, you just want to keep an open mind and see what a player's first reaction is to your game.

The next thing you have to do is fully design the study in advance to ensure you capture useful and valid data during your tests – otherwise you'll not be able to answer those original questions. You also need to decide how this data will be captured. These are big topics, and in next month's article we'll discuss the pros and cons of six different playtesting techniques, plus more advice for making the most from your tests.

www.verticalslice.co.uk



Portal's much-talked about obsessive playtesting resulted in an extremely tight, focused game that was universally praised

Dr Graham McAllister is the director of Vertical Slice, the first UK company to focus specifically on video game usability. He is a senior lecturer in human-computer interaction at the University of Sussex and is also an Apple Distinguished Educator.

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Move over to the Dark Side...

DARK ENERGY

Dark Energy Digital is one of the fastest growing developer / publishers in Europe. Based in their new Manchester offices, they are working on their upcoming AAA title Hydrophobia, which is to be released on next-gen platforms.

Hydrophobia, a survival-adventure game scheduled for 2010 release, will be the first ever game to use Dark Energy's very own HydroEngine. Using their own technology, as well as industry standard packages, you will have the opportunity to work on this exciting title and create something unlike anything that has ever been done before.

These roles represent excellent opportunities for experienced games professionals to work within a growing studio in the North West UK

Contract Artists **£ Comp + Benefits**

As contract Environment Artist you will be required to create visually stunning environments with unprecedented realism. Candidates must have games industry experience and be capable of hitting the ground running in 3DS Max and Z-Brush. You should have a portfolio that can demonstrate an ability to create environments for next-gen platforms. Contracts are for 3 months initially, but may lead to permanent employment for the right person. Contact: dan@aswift.com

Contract Animators **£ Comp + Benefits**

As contract Animator, you will use your skills to create realistic human movements throughout the game, bringing the games characters to life. You should have games industry experience and be capable of creating key-frame and mo-capped animations suitable for next-gen platforms; some technical knowledge is also advantageous. Contracts are for 3 months initially, but may lead to permanent employment for the right person. Contact: dan@aswift.com

PR & Marketing Exec **£ Comp + Benefits**

As PR & Marketing Executive you will be involved with the new IP from the very start of the development process. You will be responsible for market research, identifying gaps in the market and identifying future trends while at the same time promoting products throughout your network. Candidates should have 1/2 years experience within a PR/Marketing agency or a video games company. This is a permanent position. Contact: ken@aswift.com

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BUILD

THE LATEST TOOLS NEWS, TECH UPDATES & TUTORIALS

HEARD ABOUT: SCE London Studio's EyePet, p50

TOOLS: Trinigy's new browser Vision

p46

GUIDE: SCM and version control

p48

KEY RELEASE: Grip's new AI middleware systems

p49

Special Effect

How BioWare got more familiar with Unreal for Mass Effect 2, p51

UNITY: WRITE ONCE, DEPLOY ANYWHERE > P52

Murder, she wrote once

ONE OF THE VERY first features I wrote after joining *Develop* two and a half years ago was about the modern reality of multi-platform development.

At the time, the PS3 was still new on the scene and those dastardly SPUs were causing a lot of headaches for those not willing to re-evaluate the structure of their technology. At the same time, Nintendo bucked the brute horsepower trend by focusing its innovation on the controller instead.

Basically, deploying the same game across multiple platforms was not quite as easy as it had been in previous generations. Now that the dust has settled, so too has the situation: while it's probably still not quite as straightforward as a PS2 to Gamecube port might have once been, multi-platform is once again the norm.

What's interesting now, however, is that when middleware vendors talk about 'write once, deploy anywhere' – as evidenced by Trinigy on these pages, and Unity later in this issue – it doesn't really mean different consoles anymore, but entirely different markets.

iPhone, console digital marketplaces, browsers: these aren't just different targets, they're different markets, different demographics, different strategies. You might be able to run the same content on all of these different devices, but unless you know who you're playing to (and the economics and risks involved) then the full potential of these possibilities won't be apparent.

What it does enable, however, is for a staggered approach. Witness Unity star *Tumbledrop*, which started as a browser game, before being tailored for iPhone and now going large scale – in terms of design as well as graphics – on PC, Mac and iPad. To not do so would extend the mantra to 'Write once, deploy anywhere, get paid once.'

Ed Fear
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A new

A new version of Trinigy's Vision Engine is set to be revealed at GDC, and it marks an aggressive move into the burgeoning browser gaming arena. **Ed Fear** spoke to Dag Frommhold, managing director of Trinigy, to find out more…

Why make the move into supporting browser-based gaming?
We've been thinking about this move for quite some time and we felt that the time was right.

In the last 12 to 18 months there's been a lot of discussion in the industry about a shift towards what's called 'casual' and potentially evolving new requirements for middleware and accordant business models. Basically, we've been following this area for much longer than that, and we diversified our licensing model long ago to meet this evolution in gaming. We were probably one of the first middleware companies to provide a specific licensing model for casual/lower-end games back in 2004. Later on, we adjusted that model to serve the needs of our customers in the growing market of downloadable console games.

Now, considering the growth in browser-based gaming, Vision for browsers – which we're calling WebVision – was just a logical step for us and our customers to take.

From a technological point of view, the Vision Engine scales very well across platforms. We have a platform version for the Wii on one end of the spectrum and support for high-end DX11-level features on the other end. This scalability makes Vision well suited for browser-based gaming. Furthermore, quite a few of our customers are actively looking into developing browser-based games. So, after conversations with our customers and analysing what they need and how we could smoothly integrate development for browser-based games in the existing workflow, we sat down and started breathing life into WebVision.

Vision licensees developing for WebVision essentially use the same tools set as other Vision developers. They can use the full feature set of the Vision Engine, and moving an existing offline title into a browser environment is completely straightforward.

With the advances being made in open-standard 3D technologies for the web (such as WebGL and Google's O3D) do you think there's scope for plugin-requiring 3D on the web?
WebVision is a full game engine, complete with high-level feature support and a comprehensive toolset. Comparing it to WebGL would be like comparing a game engine to DirectX – it takes significantly less development time to create a game if you can rely on a proven, fully-featured game engine instead of having to write everything from scratch using a less comprehensive graphics API.

Additionally, there's a significant performance difference between a solution like WebVision, which runs native code and is highly optimised, and a JavaScript-based environment as these other technologies use. The scenes that WebVision is able to manage and render can be far more complex than anything you can do in WebGL.

Would it be fair to say that consoles and PCs are still the main focus for Trinigy?
Our main focus is to serve our customers with the technology, support, platforms and sales channels they need to be successful, and to tear down technical barriers where necessary. We're sure that we'll see many great games based on WebVision out there in the future and beyond doubt there'll be even more great Vision-based games on consoles and client-based PC games hitting the shelf and online platforms. In fact, the idea is to enable our customers to develop their titles for a variety of platforms from one source without technical barriers. The platform decision should only be a matter of what makes most sense for a specific title and its target group.

Technologically, we have always focused on providing a scalable game engine with a cutting-edge feature set optimised for each individual

platform. We aggressively use multithreading on PC and consoles, take advantage of the latest graphics features like tessellation in DirectX11, and provide powerful forward and deferred renderers with a host of state-of-the-art graphics techniques. Browser-based games now benefit from these features as well while still maintaining full compatibility with lower-end graphics hardware.

How does the market for browser gaming differ from the console markets?
From a user or gamer perspective, we don't see major differences from the console markets at its heart. In today's console markets we see offerings for virtually all types of gamers, including hardcore gamers, casual gamers, family gamers and more. Having a look at today's browser games, we recognise that we basically have a very similar range of offerings – from tiny little casual games up to fully-fledged role-playing games with large worlds and hundred of thousands of users.

On the other hand, looking at the business models and revenue streams behind browser-based gaming we recognise significant differences. While console games still mostly work on a 'pay, get and play' basis, browser games have been successfully celebrating the free-to-play and – to a decreasing extent –the advert-funded business model.

Last but not least, but maybe most importantly, we find big differences between both markets in terms of how to actually reach target customers, how to market a game, to get the word out and where to distribute the game. At the end of the day, we all want to transform that into as much revenue as possible; but truth is, the two markets require different approaches and strategies to achieve that.

Vision Engine has different licensing models for large-scale and casual/digital titles – where does browser gaming fit into this?
The really great thing about WebVision is that is does not require an additional licensing model. You can simply consider WebVision as an additional distribution channel for your games that you develop with the Vision Engine. From a licensing perspective WebVision will be launched without an additional charge for Vision customers.

> ***"We don't feel that studios' attitudes towards middleware has changed, but their requirements and view towards business models have evolved."***

Vision Engine 8 also features DirectX 11 support. Do you think this will prove more popular with developers than DirectX 10?
We expect DX11 to become significantly more popular with developers than DX10. DX10 did not provide too many features that made it interesting for developers to actively support it. In fact, most techniques could also be implemented using DX9 and, given the lack of support for downlevel hardware and the additional engineering work DX10 required, most studios stuck to DX9. DX11, in turn, provides many interesting new features, such as multithreaded rendering and tessellation. Additionally, its support for downlevel hardware is certainly attractive for studios that don't want to develop an additional DX9 version of their game. Last but not least, the DX11 API is very similar to the DX10 API, so the transition from DX10 to DX11 is much smoother than the shift from DX9 to DX10.

How has business fared during the recession – what differences have you noticed with studios' attitudes towards middleware, if any?
Trinigy has been continuously growing throughout the years, and we were particularly happy to see that growth continue in 2009 despite the downturn you mentioned. Our impression is that more and more studios are licensing middleware, and this trend seemed to remain intact during the recession.

As a result of the economic situation, game development teams are actively working on new and interesting financing models – for instance, by funding games with financing instruments known from the movie business. The task for us as a middleware provider is to listen to the customers, work closely with them, understand their goals, align with the market and adjust our business model as necessary and where reasonable. It's essential to look at how our customers will generate revenue.

So, in other words , we don't feel that studios' attitudes towards middleware have changed really, but their requirements and view towards business models, markets and revenue sources have evolved. This is what we need to tackle as a middleware provider.
www.sneakpeek8.com

GUIDE: SCM & ASSET MANAGEMENT

Pulling your hair out with your current SCM or asset management system mangling merges? There's a number of alternatives out there, **Ed Fear** discovers…

You hardly need us to tell you that SCM and asset management – lumped together here because of the common overlapping areas – aren't the sexiest of subjects. You're not going to get Katie Price and Kerry Katona having a public spat as to whether Hansoft or Perforce is better – largely because both names are two-syllable words, admittedly – but even in the game field it's not as sexy as volumetric cloud renderers or global radiosity lightmappers.

Nevertheless, that doesn't mean they're any less important; quite the opposite in fact. With the fidelity increase that's accompanied the jump to high definition, assets are now orders of magnitude bigger than in previous generations. As we approach measuring a game's development data footprint in terabytes – probably not an overexaggeration with games like *Mass Effect 2* and *Final Fantasy XIII* – making sure that assets can be added, modified and shoveled around without taking valuable hours to execute is absolutely vital, as are the project management and bug-tracking features when dealing with spiralling amounts of content. Here are four of the most popular solutions.

ALIENBRAIN

DEVELOPER
Avid
CLIENTS
Lionhead, Capcom, Ninja Theory, Blizzard
PLATFORMS
Windows, OS X, Linux
PRICE
From $12,000
CONTACT
info@alienbrain.com

Alienbrain was designed especially for visual assets

www.alienbrain.com

'Asset Management for Artists' is the claim that Alienbrain hangs its lapel on, priding itself on a user interface designed especially for the more visually minded. But rather than being some sort of slight on the mental faculties of artists, what it really means is that high-quality thumbnail previews are available for all assets, including 3D models and scenes, while programmers aren't left out – there's integration support for Microsoft Visual Studio too. Naturally, it works remotely as well as on-site.

HANSOFT

DEVELOPER
Hansoft
CLIENTS
Crytek, BioWare, Harmonix, Ubisoft
PLATFORMS
Windows (Linux/OSX via WINE)
PRICE
Available on request
CONTACT
solutions@hansoft.se

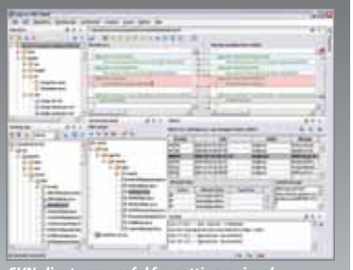
Hansoft mixes agile project planning with QA and bug tracking to great effect

www.hansoft.se

Emerging to tackle the dominance of Perforce in the industry, Hansoft took a decidely game-focused approach and won over a huge number of people when it embraced agile planning just as much of the industry also did. The latest version is 6.0, released just a few weeks ago, which focuses on improving the usability of existing features and workflows rather than introducing any major new ones. But with a client list like that, perhaps evolution is better than revolution for now.

SUBVERSION

DEVELOPER
N/A (now Apache Incubator project)
CLIENTS
Various
PLATFORMS
Everything
PRICE
Free (open-source)
CONTACT
N/A



SVN clients are useful for getting a visual representation of your project (here: Synchro SVN)

subversion.apache.org

As one of the most popular source control standards out there, Subversion has certainly seen a lot of use over the past few years. Perhaps not entirely suited to contemporary triple-A game development – some say that it might be a bit flaky when dealing with huge asset banks – and somewhat superceded by the more advanced GIT, it's still used amongst a variety of smaller-scale projects across the world. Most importantly, it's free, and there's clients for almost every platform under the sun.

PERFORCE

DEVELOPER
Perforce
CLIENTS
Sony Online Entertainment, Epic
PLATFORMS
Windows, Unix, Mac OS X
PRICE
Available on request
CONTACT
Via website

Perforce is still the heavyweight in the SCM field

www.perforce.com

Perforce has been the big daddy in games development for quite some time, and continues to court some of the biggest names in the field. The latest version, 2009.2, added 'shelving' – the ability to cache modified files on the server without checking them in as the latest version – and increased offline access, allowing users to queue up actions such as editing files, adding new ones and deleting others, and have them execute when an internet connection is available.

KEYRELEASE

Grip Digital Extras and Character Control System

Once AI middleware was seen as a no-man's land, but it's now one of the fastest growing sectors. **Ed Fear** talks to new upstart Grip about its two innovative solutions…

PRODUCT: AI middleware
COMPANY: Grip
PRICE: Available on request
CONTACT: www.gripnet.com

Grip's Digital Extras System helped create a realistically populated Shanghai for EA Montreal's Army of Two: The 40th Day

It's the age old question: what do you do when you've sold your technology upstart to a bigger company? Do you live the life of the nouveau riche just off the coast of Monte Carlo, or do you do it all again: put your (new) money where your mouth is and start from the bottom once more?

For Dr. Paul Kruszewski, it was the latter course of action. Having set up BioGraphic and nurtured the growth of the AI.implant middleware technology, he sold the firm to Engenuity in 2005.

"I've been working on game AI since 2000 and in that time have seen a lot of progress in the field of AI, but after finishing AI.implant, it became clear to me that pathfinding was only the tip of the iceberg and there was so much more to do," he says.

"One of the key reasons for the success of AI.implant was the working relationship that co-founder Aaron Davey and myself created while at Engenuity, the company to whom I sold BioGraphic. While there, I was in charge of all outside stuff – sales, relationships – and Aaron was in charge of all inside stuff, such as the dev team, product management; and that worked well. Grip was another opportunity to work with Aaron – I bring in crazy ideas, razor sharp programmers and AAA game contracts, while Aaron and his team leverage our technology to blow away our customers."

EXTRA HELPING

The new offering is, in fact, two separate products: the Grip Digital Extra System and Character Control System.

The Digital Extra System is, as the name somewhat suggests, dedicated to introducing the movie and television concept of 'extras' into games. It takes the two primary benefits of film extras – their cheapness compared to full actors, and their ability to be directed as a group rather than as individuals – and transposes those into the game space; meaning that designers can quickly create crowds that are controllable as a whole, and that take up a fraction of resources compared to fully-fledged NPCs.

"Numerous attempts have been made to dumb down NPCs and make them work for crowds," explains Kruszewski, "but this is pretty much impossible because the sub-systems of an NPC –physics, animation, navigation, and so on – can't be easily extricated and optimised. The Grip approach was to build a new character type from scratch only including the key elements of background characters. The result was the Digital Extra System.

"Of course, there are games that have already invested in creating secondary characters, but my question is: how many great games were never designed or produced because creating a living world was either too hard or expensive? Most of us live in cities but games are rarely set in them."

CONTROL FREAK

The Character Control System, on the other hand, is a visual way of authoring behaviour trees that aims to bridge the divide between designer and programmer when working on AI.

"Traditionally, the game designer will write up a description of an NPC which the AI programmer then reads and implements in code," Kruszewski says.

"Once done, he gives it back to the designer who plays the NPC which inevitably isn't what he envisioned, so the designer and programmer meet, pictures are drawn, and they try again. And again, and again. The issue is that they lack a common AI language to define behavior.

"With CCS, the programmer uses the behaviour tree system as a way to organise the flow of the NPC's AI. Because the tree can be visualised and its control flow is easy to read, the designer can sit down with the programmer and visually walk through the tree. This allows the designer to catch his own inevitable gaps in logic long before any code is laid down. Also because a tree is made up of small atomic units, the large problem of developing an entire NPC AI is made more manageable."

> ***"How many great games were never designed or produced because creating a living world was too hard or too expensive?"***

As with all of Grip's products, the system was designed within the context of a game's development in order to ensure that it fulfils a need. With the Digital Extra System it was EA Montreal's *Army of Two: The 40th Day* – set in a virtual Shanghai that needed populating. For the Character Control System, it's Intel's *Project Offset* and Eidos Montreal's *Deus Ex 3* that is proving the incubator for the tech.

"Every technical decision Grip makes is based on how game developers actually build games and the kind of AI they are trying to achieve," asserts Kruszewski, "and so working directly on these games helps us incredibly."

HEARD ABOUT EyePet

John Broomhall gets down on the carpet to find out what makes Sony's virtual pet squeal…

DEVELOPER:
SCE London Studio/SCEE

AUDIO TEAM:
Audio Lead and Principal Composer: Alastair Lindsay
Sound Design: Malin Avidsson, Jo Orland, Stephen O'Callaghan
Additional Music: Richard Jacques Studios
Dialogue Production: Alex Joseph
Dialogue Implementation: Haresh Patel

As music manager for Sony Computer Entertainment Europe, Alastair Lindsay has a unique role. Working out of the London Studio as part of SCEE's Creative Services Group, not only does he pen the tunes for selected projects, he also supervises all commissioned music, acting as a middle man between composers and project teams. After advising on budgets and composer selection, he manages the schedule, acting as a single point of contact and support for hired tunesmiths.

One of the most important services he provides to dev teams is establishing creative direction and a definition of music cues they require. "Using temp tracks and reference I help them get a clear idea of music style and what it has to 'say'; the mood or character," he says. "With that in place, matching a composer is relatively straightforward. Then I determine the exact requirements – how much music and where it's placed – so the team have a clear idea of what to expect. I get the composer to meet the team, and look over game materials like storyboards, artwork, and the script, for example, so they really understand the flavour we're after."

Practising what he preaches, Lindsay began work on *EyePet*'s music score in late 2007 by listening to a tonne of reference music, creating a proposed sound palette and music style guide for the team appropriate for an augmented reality virtual pet game.

"It was clear from the outset that the core music should have an intimate sound, so the dominant instrument I chose was steel-stringed acoustic guitar – some of which was recorded live, with the rest using Real Guitar and Akkord Guitar from the Kontakt library. The style is drawn from folk, pop, funk, jazz and soul, focusing on simple harmonies and strong melodies with a lot of triplet time and swing groove to add to the happy, playful vibe. Along the way I recorded myself beatboxing and even some whistling made it in, which great for adding human feel without introducing vocals or lyrics. As an added bonus we recorded a live horn section for the title theme and a couple of other cues, which meant brushing up on Sibelius to get the parts ready," he says.

> ***"It was clear from the start that core music should have an intimate sound, so the dominant instrument I chose was steel-stringed acoustic guitar."***

"Compositionally, the main challenge was 'Open Play' where gameplay time and type is indeterminate – you can interact with your EyePet, introduce an object for him to play with or, if you stay still, he'll fall asleep. The team didn't want it musically blank because the sound FX are fairly minimal, so I eventually settled on a simple interactive music system with three levels of intensity – idle being the lowest, the next level reflecting some movement and the highest level for where your EyePet's very active, jumping around and excited. It works very well with really smooth natural-sounding tempo-synced transitions. Musically the lowest level is steel string guitar and a smattering of electric piano, then moving up you also get some bass and percussion and the top intensity level adds all the drum parts."

For implementation, Lindsay used SCEE's smart in-house tool, a customised version of Acid Pro. "You need a tool that looks familiar to audio people that you can use to define sections and set-up interactive replay parameters," he explains. "It has some powerful functionality. You can decide how long transitions will last on a per-track basis and define how motifs and stingers play over the main tracks. We work at 48kHz in 16- or 24-bit, but on export from the tool everything's converted to MP3, usually 128kbps. We can also handle 5.1 and 7.1 mixes in MP3, and we encourage surround formats for many projects."

As audio lead, Lindsay also had to grapple with the thorny problem of vocal 'emotes' for the EyePet himself. "We wanted to keep it animal-like vocally, but one of the activities you can do threw a spanner in the works was teaching him to sing simple melodies which he can then sing back to you. To start with, the human voice sounded too human to me and I was adamant it should all match up credibly as one 'voice'. Thankfully, our external sound designer found the right combination using a quirky real human voice mashed up with animal source recordings."

As well as three hours of music, *EyePet* features thousands of sound effects for the numerous activities, many of which are physics-based and highly abstract – for example, rolling and scraping a virtual toy car made of paper or cloth. But throughout, the team has managed to stay faithful to the original mantra – 'playful and happy, but not cartoony' – and the end result is a well-rounded, audio experience that cannot help but make you smile.

EyePet's audio lead and principal composer Alastair Lindsay

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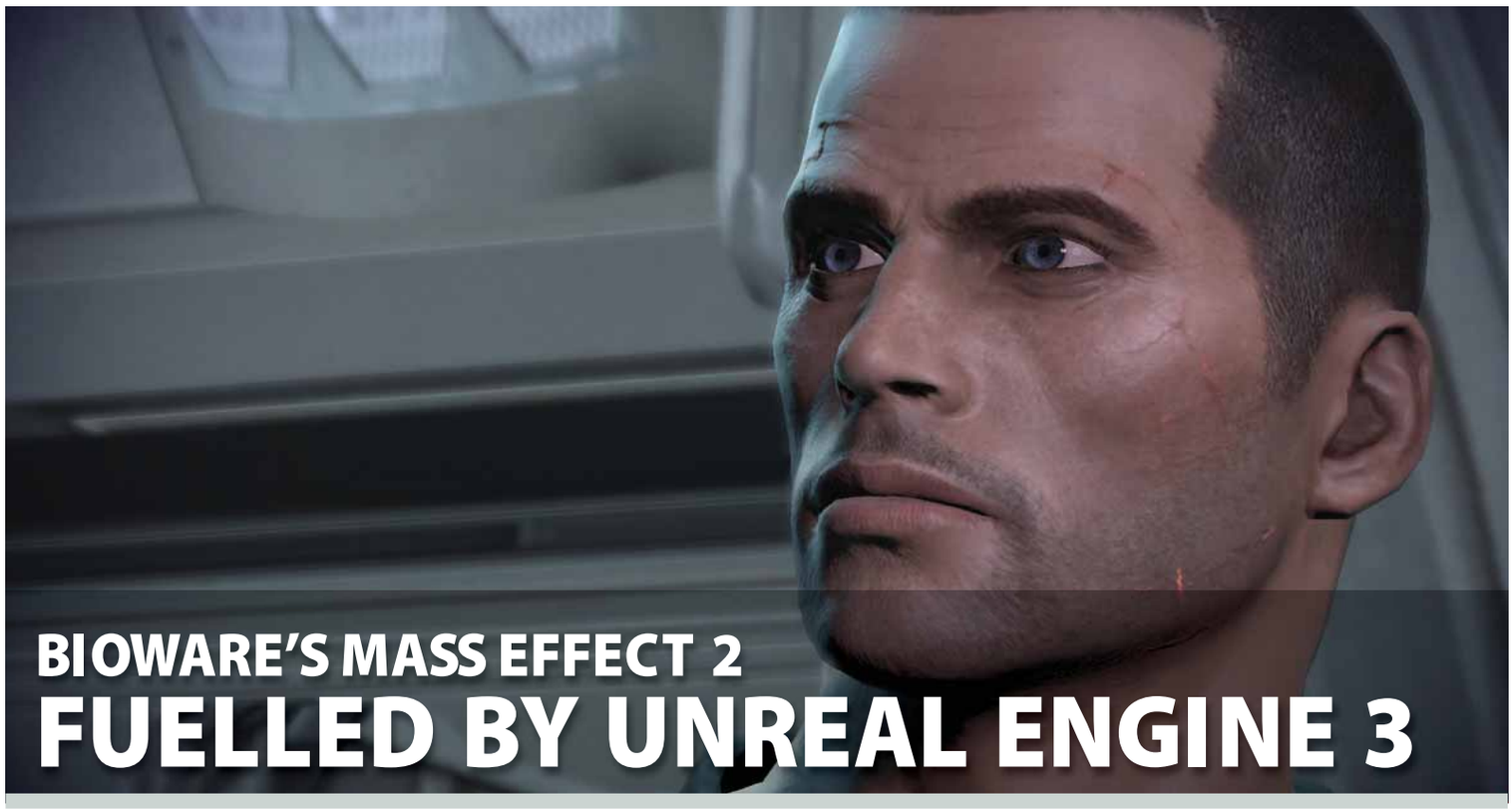

BIOWARE'S MASS EFFECT 2

FUELLED BY UNREAL ENGINE 3

When creating the sequel to *Mass Effect*, BioWare focused on optimising the Unreal Engine 3 base technology to create a more immersive sci-fi RPG experience. Over 150 people at BioWare worked on *Mass Effect 2*, which has been honored as one of the most highly rated Xbox 360 games of all time. Having worked with UE3 on the original *Mass Effect*, lead producer Casey Hudson says his team pushed every aspect of the sequel forward from both a technology and gameplay perspective.

"Having shipped the game on Unreal with a *Mass Effect* total framework in place, we looked at what our final performance memory budget was and billed *Mass Effect 2* to that budget," explains Hudson. "We didn't have the opportunity to do that in the first game, so that helped us to better develop content. We also were able to look at where we were spending the most time on the least effective tasks. So it's not that we're using more of the CPU, it's just that we look at things like the pre-vis phase, for example, in Scaleform and we rewrote our code for that. We just found little opportunities where we were surprised at how much time we were spending in the wrong places like you do in any normal game development process."

Hudson says his team utilised Unreal Matinee and Unreal Kismet to improve the player experience in *Mass Effect 2*.

"Matinee is really integrated into the way we build our proprietary technology for digital acting and conversation and things like that, so we have our own system and tools that work with our conversation system," he adds. "Our writers populate a dialogue editor and that becomes fused with the way you end up seeing many different pieces of Matinee play out in combination when you have a conversation with characters. We used Kismet for scripting a lot of the way that the level responds to the action, or prompting our enemies to do certain AI, or having movers react and start moving around and things like that."

Although BioWare's programmers communicated with Epic and other game developers through the Unreal Developer Network on *Mass Effect 2*, they spent most of their time utilising UDN on the first game, especially as they ramped up on all the details of the technology the first time around.

"I think UDN is a really good service for when you're first learning the engine," Hudson adds. "The biggest challenge when using someone else's engine is figuring out how you're supposed to use it and how to best use it. We used it a lot on *Mass Effect* and I know that our guys are always in contact with Epic."

BioWare chose UE3 for the *Mass Effect* trilogy because they wanted to make an immersive third-person perspective shooter game with sci-fi environments.

"We started out already being a game that was going to work with Unreal, but we took further steps with *Mass Effect 2* to really build the content a lot more like you're supposed to with the engine," says Hudson. "With *Mass Effect*, we built a lot of things handmade at an intermediate level and with *Mass Effect 2* we used more of the Epic method where we build lots of pieces and then assemble them in the end. They're just little differences and it comes down to a team really learning a different methodology with the technology."

David DeMartini, senior vice president of EA Partners, agrees that BioWare's work with Unreal Engine 3 shows off the technology's extensibility: "Unreal Engine 3 ships with the tools and technologies we trust for making triple-A games," he says. "We have a great working relationship with Epic from both the development and licensee perspective, and we're continually pleased with how they keep their game engine technology competitive, which helps us deliver the excellent quality games that EA customers expect."

UPCOMING EPIC ATTENDED EVENTS:

Game Connection San Francisco, CA
March 8th – March 10th, 2010

Game Developers Conference San Francisco, CA
March 9th – March 13th, 2010

Triangle Game Conference Raleigh, NC
April 7th – April 8th, 2010

Electronic Entertainment Expo Los Angeles, CA
June 15th – June 17th, 2010

Please email: mrein@epicgames.com for appointments.

To discuss anything raised in this column or general licensing opportunities for Epic Games' *Unreal* engine, contact: **mrein@epicgames.com**

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Mark Rein is vice president of Epic Games based in Raleigh, North Carolina. Since 1992 Mark has worked on Epic's licensing and publishing deals, business development, public relations, academic relations, marketing and business operations.
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UNITYFOCUS

Author Once, Deploy Anywhere

Unity's ability to run content virtually unmodified on multiple platforms is helping indies concentrate on content first and platform second. **Thomas Grové** talks to two such users to find out how it makes a difference…

Author once, deploy anywhere – every developer wanting to avoid rewriting core parts of their engine, or completely re-authoring their content for another platform has dreamt of this.

At Unity we've taken this quest seriously and we're starting to see it pay off. The value in being able to publish your game for multiple platforms with minimal tweaks is evident: a lower cost of development and a larger potential customer base.

But that's just the beginning – it turns out that when you take the pain out of cross-platform deployment, developers are much more willing to experiment with different platforms, spend time on new features that take advantage of a platform's unique characteristics, explore interoperability between different platforms, or to create free-to-play versions of their games as an advertisement for the other versions.

> ***Take the pain out of cross-platform and developers are much more willing to experiment.***

That's exactly what Press Play – developers of the award winning *Max and the Magic Marker* – have done: they have a free to play web version of their game that entices would be customers to buy the full version; either on WiiWare or via a PC or Mac download.

But Press Play isn't alone in the laboratory; we're increasingly seeing developers taking advantage of Unity's ability to target multiple platforms.

I've asked two of these pioneers about their experiences: John Grden, a notable flash developer who recently picked up Unity to make his dream game and Hayden Scott-Baron, an artist who was recently able to 'turn indie' by using Unity…

➢***Max and the Magic Marker***; available for WiiWare, Windows, OS X, and the web. Play it for free at: maxandthemagicmarker.com/

➢***Tumbledrop***; available for iPhone and the web. Play it for free at: tumbledrop.com/

➢***Star Wars: Trench Run***; available for iPhone and the web. Play it for free at: www.starwars.com/games/playnow/trench_run/

➢To learn more about using Unity to deploy your games to multiple platforms, visit unity3d.com

John Grden

Senior Developer at Infrared5, creators of Star Wars: Trench Run

You created Star Wars: Trench Run for the iPhone and then released the web version. What does being able to author once and deploy anywhere mean to you?
As a smaller shop it means everything to us. Time equals money, and the development costs come right out of our pocket. So, if Unity didn't do this, people would probably never experience *Trench Run* on the web at all. Just because of the sheer cost and probable noticeable continuity issue we'd see between the two versions. I mean, Unity allows us not only to deploy easily, but to be able to afford it *and* maintain continuity all around.

How hard was it to modify your game to work on the web?
It was *very* easy. I made sure to keep the hooks for turning and input nice and neat. The day when we moved it over, it nearly worked right off the bat with minor code updates to strip out the iPhone specific API calls.

What types of features or content did you add, subtract, or alter?
We added real lighting for one thing – the trench features real lighting and shadows on the obstacles and ships. We added lights for the lasers that fire down the trench as well as the cannons shooting at you.

We also used the Detonator package for the explosions which look amazing; flying through the smoke and the trails of the explosions just rocks.

But beyond polish with some shaders, lighting, and control input, the game is identical to the iPhone version. We certainly didn't want to stray from that.

Anything else to brag about?
The experience went so well with this application, that we've been approved and are currently working on v2.0 for the iPhone and web which will release simultaneously this time around.

I can't give details away, but I can say that we listened to fan feedback and I think people will be blown away by not only seeing what they asked for, but the extras we've added that have not been done before in a *Star Wars* title – ever!

Also, because of how well this has gone, I now get to work on *Star Wars* and Unity full time. I haven't touched Flash in over a year now, but this is exactly the type of work I'd always wanted to be doing.

Hayden Scott-Baron

Founder of Starfruit Games, creator of Tumbledrop

What was the development timeframe for the web version of Tumbledrop?
The original version of *Tumbledrop* was put together in eight weeks, working only part time, with no prior experience of Unity.

How many different version have you made?
I've made two versions so far, one for browsers and one for iPhone. There was also an additional branded version of the browser game made exclusively for the Cartoon Network.

What kinds of changes did you make to the iPhone version?
I spent several months working on improvements for the iPhone, so the game became much more like a sequel. Tilting islands and balloon type objects introduced far more complex behaviours into the puzzles, and the medals allowed keen players to challenge themselves for much more replay value.

One of the biggest difficulties was the lack of a mouse pointer, and realising that the player wouldn't want to keep their finger on the screen because it obscures the gameplay. The game now has the ability to queue up your next move, which allowed players to tap the screen when they were ready, rather than always waiting for the timer.

Are you considering deploying to any other platforms?
I'm currently working on *Tumbledrop Deluxe* for PC, Mac and iPad. The larger screen on the iPad means that I can create more complex levels, and the PC and Mac version should be almost identical on the iPad.

I'm also presently looking into the options for a NIntendo Wii version of the game, because of the pointer interface.

What does the ability to author once and deploy anywhere mean to you?
Developing in this way allows me to focus on the game design more than the hardware, and it gives me more opportunities to present the product to the right audience. It also affords me the freedom to change my target platform midway through the development cycle.

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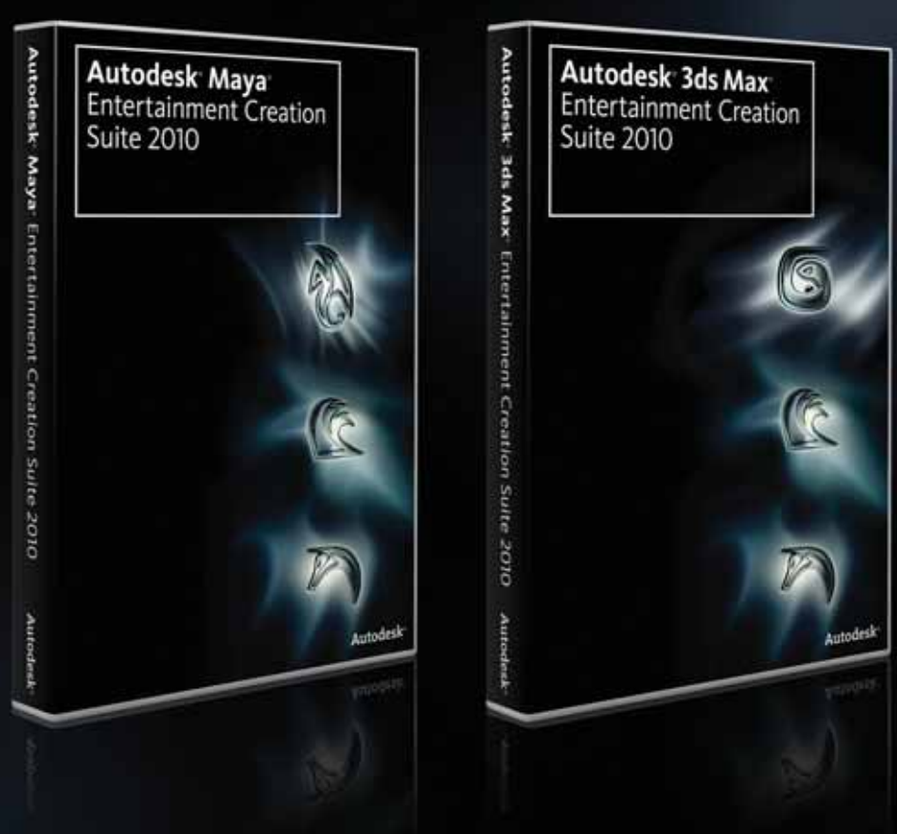
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develop in Brighton

be inspired

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Develop in Brighton manages to set the right balance with lots of relevant sessions coupled with great networking events. Thoroughly recommend it.
David Jones, CEO, Realtime Worlds

I greatly enjoyed the passion and buzz present at this years Develop in Brighton.. I'd certainly make sure Brighton was one I'd recommend people attend, such was the value and mix of attendees.
Martyn Brown, Co-founder, Team17

Yet again the Develop Conference provided an energetic and exciting environment in which to meet new people and learn new things.
Jonathan Smith, Development Director, Traveller's Tales

I really got the impression that Develop is an event with its own identity that combines truly unique sessions with a warm and enthusiastic audience.
Masaya Matsuura, President, NanaOn-Sha

It far exceeded my expectations. I met lots of friends, had really great business meetings, lots of press, and it all happens in an amazing location.
David Perry, Creative Director, Acclaim Games

Develop has become a "must go to event" for Media Molecule. The programme is always fresh and innovative plus it's a great chance to catch up with fellow developers in a relaxed setting.
Mark Healey, Co- Founder, Media Molecule

Develop in Brighton is back for its fifth year with over 80 quality sessions given by international development experts and around 1200 developers getting together to share ideas, learn from each other and socialise over the three days.

And, following its hugely successful launch last year, Evolve – the part of the conference that focuses on how to develop games for new platforms, new technologies and new markets – will open the conference again on Tuesday 13 July.

Evolve Keynotes Just Announced

EVOLVE KEYNOTE

Louis Castle – CEO, Instant Action Inc.
Only the second individual honoured with the Game Developer Associations lifetime achievement award, he's contributed to over 100 games, most recently collaborating with Steven Spielberg to create the award winning game franchise, BOOM BLOX

EVOLVE KEYNOTE

David Helgason – CEO and Co-founder, Unity Technologies
An entrepreneur, visionary, and ex-programmer, David has founded and participated in startups in fields such as news & community integration, music distribution, and consulting. He serves on the boards of several games and technology startups.

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PEOPLE:
Ed Fear joins Curve Studios
p58

TOOLS:
Vision Engine gets Fork Particle support
p60

SERVICES:
Ben Wibberley goes to Hollywood
p62

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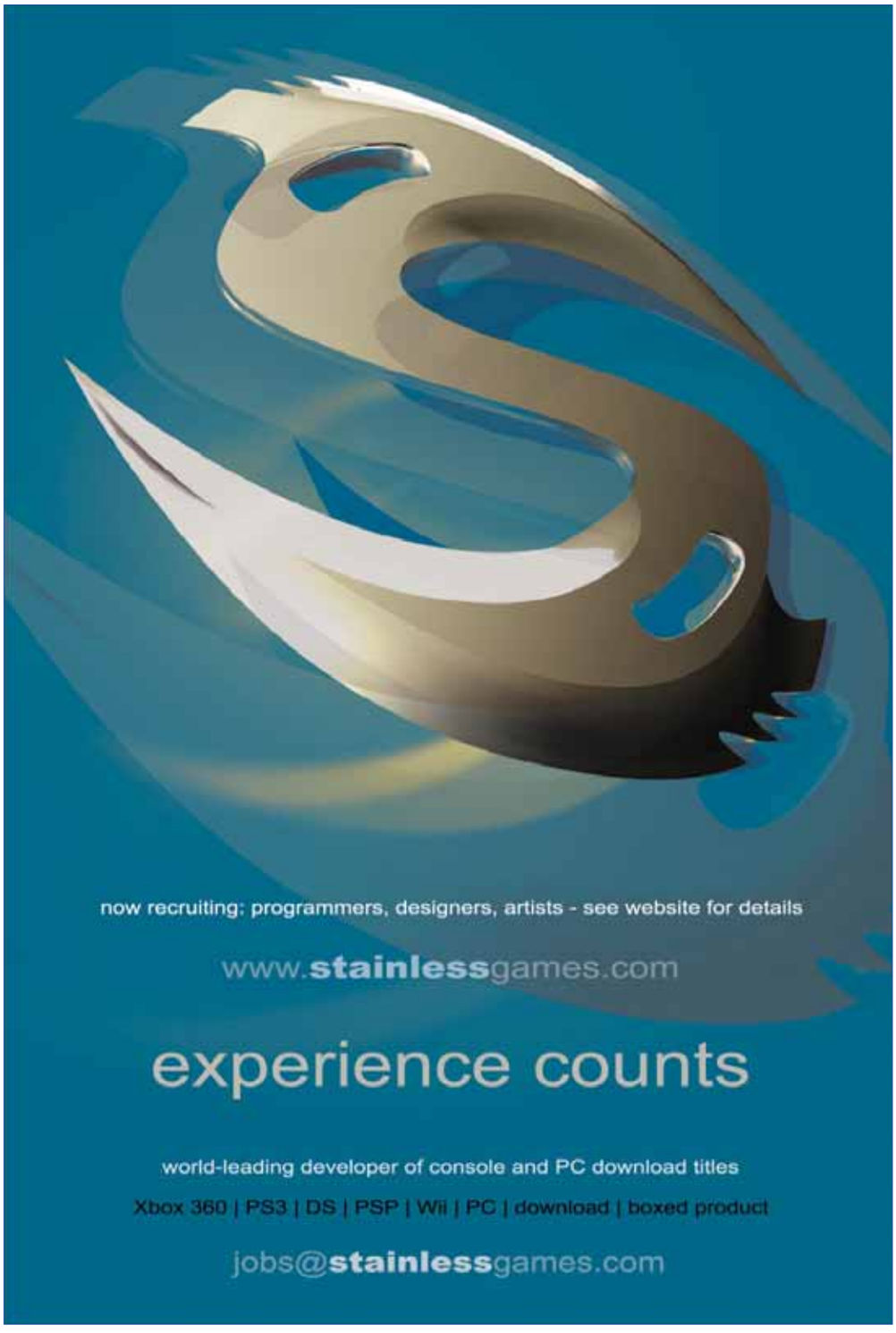
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Studio News

This month: Curve, Wonderland and Littleloud

Ed Fear has joined North London based **Curve Studios** as production associate.

Ed was previously deputy editor of this fine magazine, working his way up from staff writer after he joined straight from university in 2007. As part of his new role, he'll be assisting the production of the company's multiple titles set for release this year, and will also work on publicising the company's titles ahead of the release of self-published PSN game *Explodemon!* later this year.

"After an amazing two and a half years with *Develop* it wasn't an easy decision to make, and I'll certainly miss the brilliant team here. Luckily, I've managed to dupe another super-talented group at Curve who, after toiling away somewhat under the radar for five years, are set to unleash a salvo of awesome in 2010 with an number of exciting and innovative titles," he said (or, at least, wrote here).

"I'm looking forward to not only helping with the production of these games, but also to blackmailing old acquaintances and workmates in the name of making sure everyone knows just how awesome they are."

www.curve-studios.com

Three experienced developers at Lionhead have broken away from the acclaimed studio to form their own outfit.

Guilford-based **Wonderland Software** was set up recently by Matthew Wiggins and Mark Rose, who were later joined by Al Harding.

All three were based at Lionhead before they decided to work under their own steam, having previously helped create games such as *Fable 1*, *Fable 2*, and *Black & White 2*.

In announcing their new venture the trio said that they all felt "the time was right for us to break out on our own."

The move is reminiscent of Dene Carter's recent departure from Lionhead to form his own iPhone microstudio – not least because both Wonderland and Carter's studio Fluttermind will start out by developing for mobile games.

Wonderland was founded back in the Summer last year, though the studio has only now decided to publicly announce its formation.

"Wonderland is a scrappy startup, aiming towards a big future," read the announcement from the studio. "Our games will be full of charm and wonder, with social interaction at their core. Initially targeting the iPhone and iPod Touch, we can't wait to see what the future holds."

www.wonderlandsoftware.com

Brighton independent **Littleloud** has welcomed Emma Timms to the team as head of production. Timms brings her most recent experience from her time with Babel Media where she served as producer and senior project manager.

A veteran with some 15 years in media production, Trimms has previously worked across the advertising, publishing, TV, games and film production sectors. Within the games industry Trimms has also held positions with Interplay, LEGO Software and Eidos.

She joins BAFTA winning developer and creative agency Littleloud as the studio concludes its work on its *Doctor Who* animated series and in the wake of the release of its first iPhone release Carpl.

www.littleloud.com

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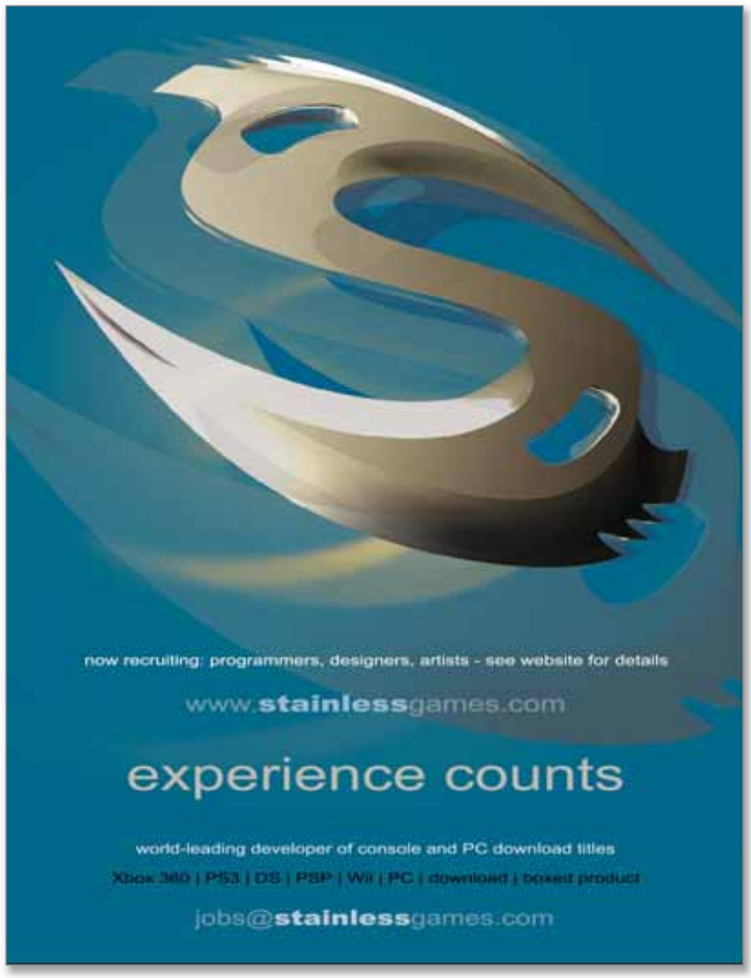
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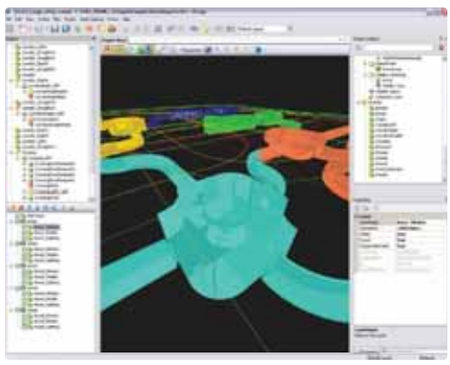
Tools News

Vision Engine gets Fork Particle technology integration



Game engine company **Trinigy** has announced a new integration deal for its Vision Engine.

The new deal gives Vision Engine users access to the real-time particle effects tech provided by Californian specialist Fork Particle.

Fork Particle's tech enables real-time simulation of particle effects in-game, allowing or a more simplified and rapid particle effects job.

The new integration will affect Vision Engine's run-time technology and scene editor, VForge, and will commence when Trinigy releases the newest Vision SDK in February.

Fork Particle recently announced it would integrate its tech into Gamebryo's LightSpeed platform.

"Game developers using our Vision Engine with Fork Particle can now enjoy even more creative freedom by authoring spectacular particle effects out-of-the-box," said Dag Frommhold, managing director at Trinigy.

www.trinigy.net

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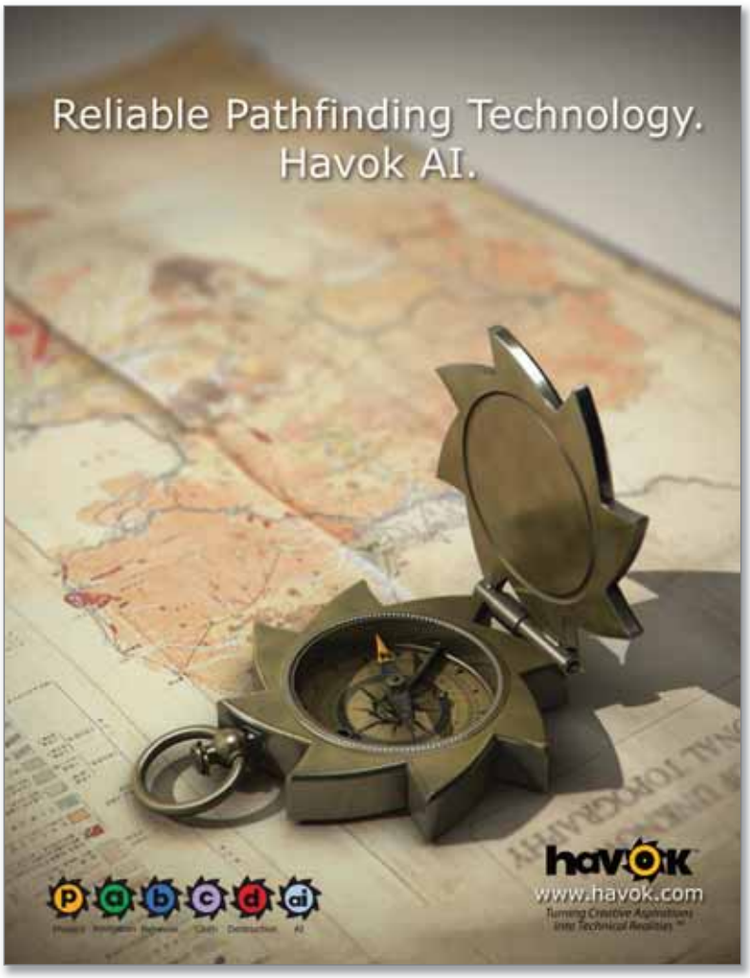


Tool Spotlight

HAVOK AI

Technology type: AI middleware

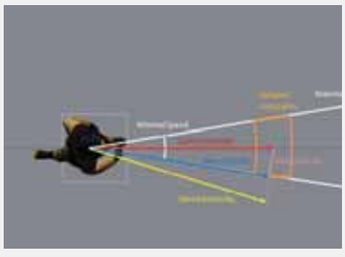
When Havok first announced that it was getting into the AI middleware business, it's fair to say that brows furrowed, interest was piqued, and x was Y. Had Havok found itself in an evolutionary dead end having become the industry standard for physics, showered with awards and almost ubiquitously used by all of the top developers? And, not only that, but focusing on AI of all things – the wild-west of middleware, in whose hills no-one has managed to pan for gold?

Of course, there is method to their madness: while the product is called AI, it's not attempting to model decision trees or ontologies or neural networks. What it is, however, is a highly optimised solution for pathfinding and dynamic navigation within games and other simulations.

The logic for Havok being the ones to tackle the pathfinding problem are two-fold. First, generating the navmesh is a highly complex, geometrical problem that requires a lot of CPU time – just like physics. This means that the company has managed to create an offline navmesh generator that can take complex scenes of 150,000-plus polygons and churn out a mesh in a matter of seconds. Not only that, but the routines used to generate routes across these navmeshes are flexible enough that they can use a single navmesh to represent the topography for numerous characters, taking into account differences in actor size – a big time and effort saving over having to generate navmeshes for each character.

The Havok difference comes in on top of this solid bedrock: a dynamic pathfinding module and a local steering module, both of which work together to create believable motion and intelligent movement in the sorts of highly dynamic environments often featured in contemporary games.

The local steering module allows you to simulate crowds, flocks, and so on; but also allows the agents to dynamically avoid objects that are still in the process of moving. Although that sounds like something everyone else offers, many other solutions wait until the object's settled before computing the avoidance. But, with Havok's background in physics, they can accurately take this movement into account, making characters react realistically to the changing environment and helping build immersion.



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W: www.havok.com

Services News

Wibberley joins talent agency

After 12 years at **Babel Media**, Ben Wibberley has taken on a new role at Hollywood talent agency William Rubin.

Wibberley co-founded Babel and oversaw the development of the business into one the biggest names in games outsourcing thanks to its global QA and testing operation.

"The decision to leave Babel was not an easy one," he told *Develop*'s sister magazine *MCV*. "I am very proud of what we have achieved with the company, the growth we have undergone and the way we have helped shape and define outsourced services.

"I'd also like to thank the operational and production teams at Babel. These are the people on the ground and without their hard work, late nights and dedication none of this would have been possible."

Babel's VP of sales and marketing Keith Russell added: "I wish Ben all the best, he remains a friend, and I think he is doing exactly the right thing for him. I know I'll miss our witty conference calls as much as Barclaycard will miss his expenses!"

Wibberley is tasked with getting the William Rubin Agency much closer the games industry and digital content.

"I believe that our industry, although constantly evolving, is on the brink of a major sea change that will revolutionise the way that we work and that we should look to other entertainment industries to see the lessons, both good and bad, that we can learn from them.

He explained: "I'll be working on offering publishing, business management, consultancy and facilitation services to game developers, distributors, service companies and publishers, as well as media, entertainment and consumer based industries that want to extend and maximize their IP, presence and ROI in interactive entertainment."

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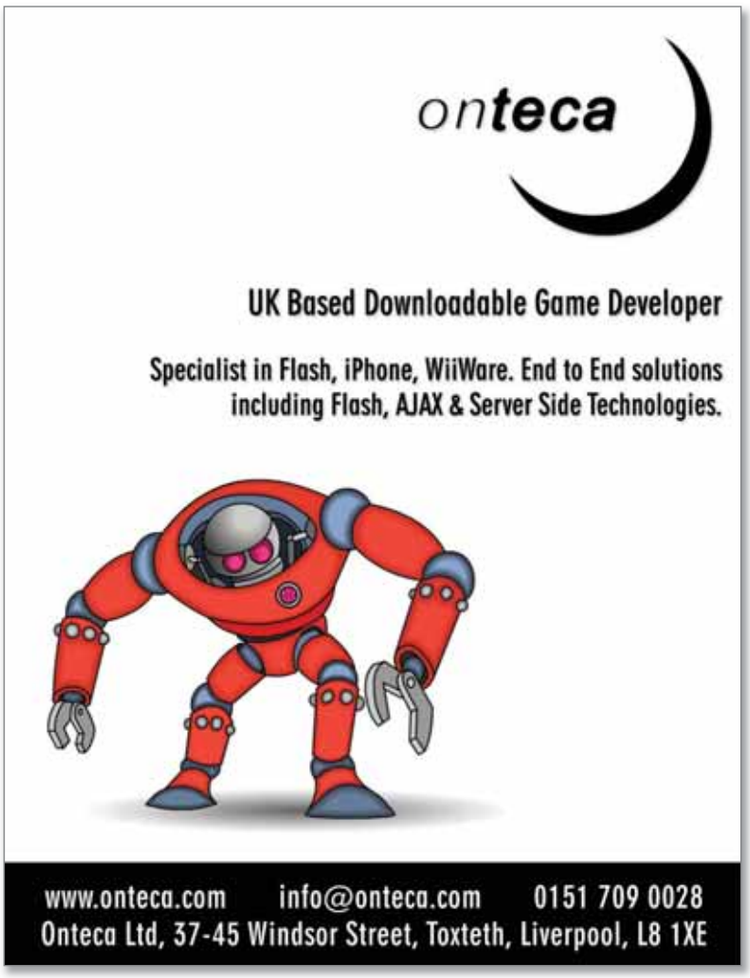
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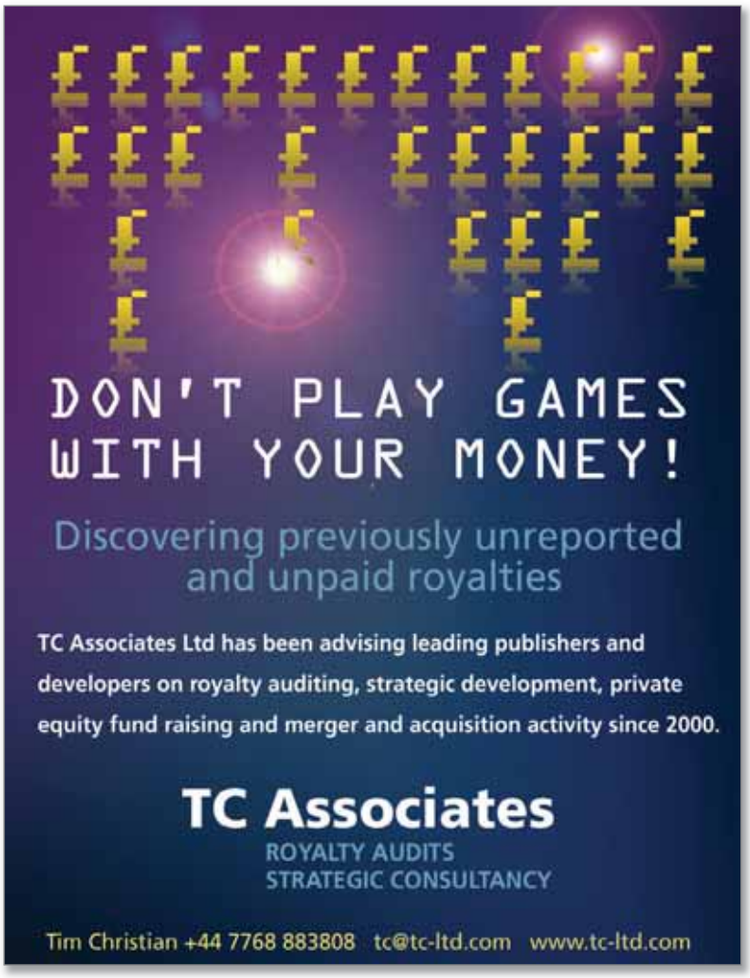
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Training News

Molyneux drops in at Derby University

Microsoft's Peter Molyneux recently visited students at **Derby University**, where he gave his time to first years working on a 72-hour games design challenge.

"Microsoft has a strong relationship with the University of Derby and has taken a few students on as interns," said Molyneux of his visit. "I've always found Derby students to be bright and able to fit into the working environment very quickly. The courses here are very hands on and vocational, and maybe that's what makes the difference.

"Our industry is subject to constant change and students need to learn how to use new tools to not only keep up but to stay ahead and truly innovate. Anyone hoping to find success in this industry must have a massive amount of self drive, enthusiasm, and be prepared to take a seed of an idea and make it a reality. There's no instruction manual for that; the ideas have to come from within."

John Sear, programme leader for Derby University's Computer Games Programming BSc added: "We were delighted to have the UK's biggest name in games development come and speak to our students. For the students to hear direct about the ongoing development of Project Natal and for them to work closely with Peter was a huge treat."

www.derby.ac.uk

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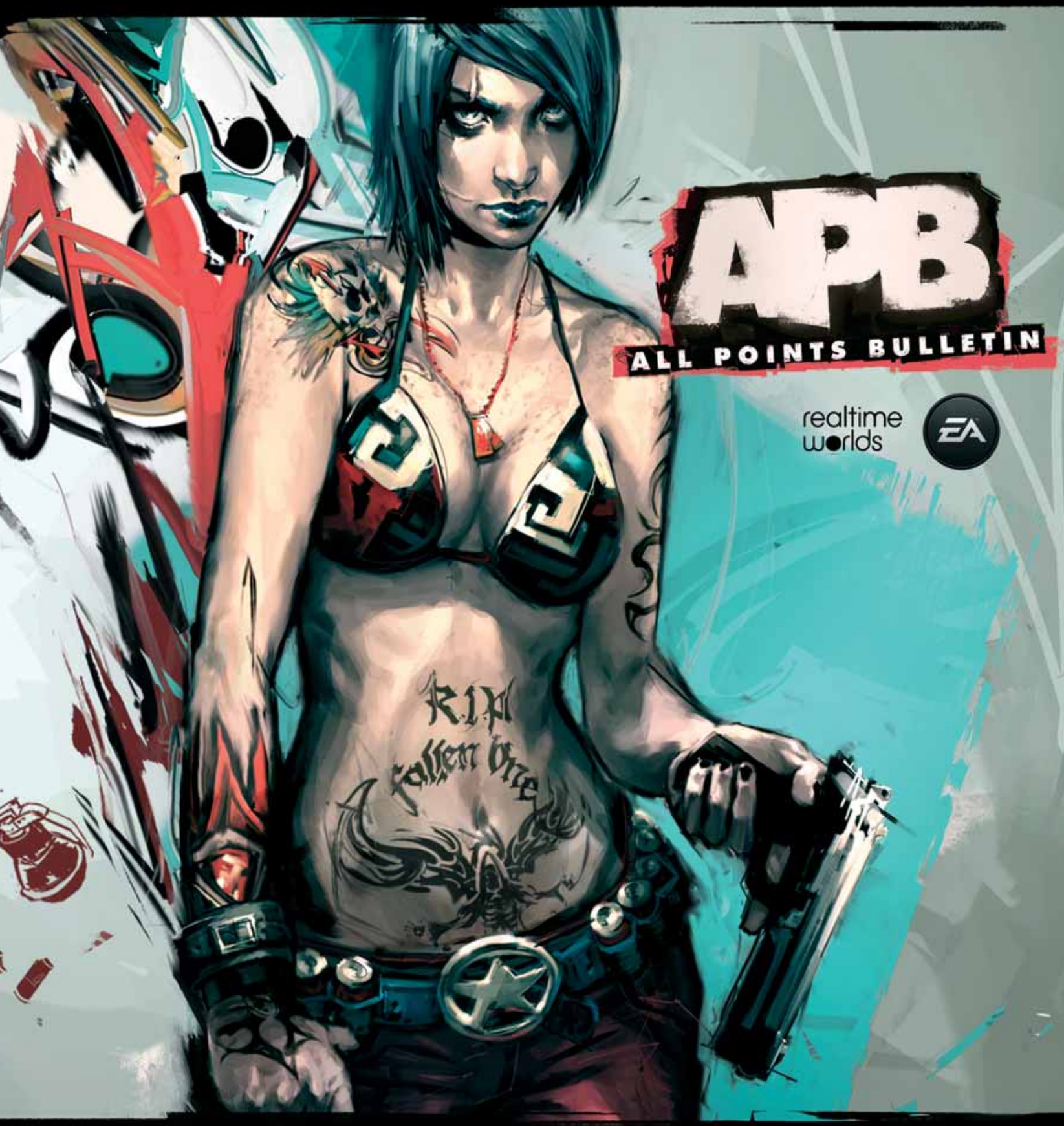

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